

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 521.—VOL. XV.]

London: Saturday, August 16, 1845.

[PRICE 6D.

SHROPSHIRE.—VALUABLE FREEHOLD MINING PROPERTY, containing 136a. 3s. 26p., or thereabouts, with a most excellent MANSION-HOUSE, called PRIORSEE HALL, situated at Priorsee, in the parish of Shifnal, within two miles of the town of Shifnal, and close to the turnpike-road, leading from Birmingham to Shrewsbury, and within a mile of each of the projected lines of railroad from Birmingham and Wolverhampton to Shrewsbury, and six miles from the town of Wellington, TO BE SOLD, BY AUCTION, in one lot, by Messrs. WALKER and PAGE, at the Swan Inn, Wolverhampton, on Monday, the 18th day of August, 1845, at Five o'clock in the afternoon, subject to such conditions as will be then produced.

For further particulars apply to Messrs. Pritchard and Co., solicitors, Boreley, Staffs.

TO BE SOLD, BY AUCTION, by Mr. THOS. GLOVER,

at the Castle Inn, in the town of Swansea, on Wednesday, the 20th day of August, 1845, at One o'clock in the afternoon (subject to such conditions as shall be then and there produced).

THE WEECH VACH COLLIERY, in the parish of Llangefelin, in the county of Glamorgan, and within two miles distance of the port of Swansea. The coal is highly bituminous, and of the best quality; all the large is readily disposed of, for ready money at the pit's mouth, for household purposes, in the town and neighbourhood, and the small is in request for copper works, gas works, and for making coke. There are two steam-engines erected on the premises, both in good order. The seams now in work are one six feet, and the other three feet, in thickness, producing at present about fifty tons per day, but the working are capable of being considerably increased; there are, however, several other veins, of similar quality, worked by level.

The South Wales Railway intersects the property. Further particulars may be obtained on application to the proprietor, T. S. Strick, Esq., Swansea; or to the auctioneer.

GLoucestershire.—ELIGIBLE INVESTMENT.—TO CAPITALISTS, RAILWAY COMPANIES, COAL AND IRON MASTERS, AND OTHERS. Mr. P. ROBINSON is instructed to submit for SALE, BY AUCTION, at the King's Head Hotel, in Gloucester, on Wednesday, the 27th day of August next, Four o'clock in the afternoon, in one lot, subject to conditions, all that superior GALE, or COAL-FIELD, known as the East Slade and Newnham Bottom Collieries, under the award of her Majesty's Dean Forest Mining Commissioners to the Cheltenham and Forest of Dean Coal Mining Company; situated in the township of West Dean, near Ruardean.

The extent of the mineral tract belonging to this colliery is shown on the map at the Auctioneer's Office in Coleford, and also by the award of the said commissioners; it contains about 140 acres of unworked coal, and is gated to the Dolf Vein, which varies in thickness from five to six feet, and will yield in every square, or superficial yard, 12 tons of coal, and known to be one of the most extensive and best works opened in the Forest of Dean. There are four pits or shafts sunk down to the coal, with two condenser steam-engines, pumping apparatus, weigh-bridge, &c., to which extensive stabling and other necessary buildings are attached; and as the only motive for selling is want of capital in the present holders to work the gale successfully, it will afford a rare opportunity for investment, or profitably working this coal-field, commanding the thickest vein in the Forest, and one of the best quality.

The situation is within about half a mile of the projected Dean Forest, and the Gloucester, Hereford, and Monmouth Railway, is equally well for Severn and Wye transit; and with judicious management, would pay a large return for the outlay.

Particulars and conditions of sale to be had on and after the 12th inst., of Mr. John Cooke, auctioneer, Cheltenham; at the place of sale; and of Mr. Robinson, land and mineral agent, Hill House, Little Dean.

ELIGIBLE MINING INVESTMENT.—FOR SALE, BY PUBLIC AUCTION, on Friday, the 29th instant, at Wright's Hotel, Liskeard, at Three o'clock in the afternoon (unless previously disposed of by Private Contract), all that promising LEAD MINE, called GREEN VALLEY, situated in the parish of Berriford, Devon, on the banks of the Tamar, opposite Calstock, with all the materials thereon, including an excellent steam-engine of the best construction, and quite new; and every other requisite for effectually working the mine.

There is at present a promising lead-lode, and abundance of fluxes in sight, and an extension of the sett southward is offered the adventurers.—For further particulars, or to treat for the purchase, apply to the purser, Samuel Phillips, Liskeard.

Dated August 11, 1845.

MERIONETHSHIRE.—FREEHOLD PROPERTY TO BE SOLD, BY AUCTION, by Mr. W. EVANS, at the Golden Lion Inn, in the town of Dolgellau, on Tuesday, September 2, 1845, between the hours of Five and Seven o'clock in the evening, subject to such conditions as shall be then produced, all that capital FARM-HOUSE, FARM, and LANDS, situated in the parish of LLANABER, in the county of Merioneth, called CAEGWLAN, consisting of 365 acres, or thereabouts. The property is situated within a short distance of the high road leading from Dolgellau to Barmouth, and is distant from the latter three miles only. It consists of arable, pasture, and with a little outlay, a comfortable residence may be made. To gentlemen interested in MINING, it is attractive, as possessing many indications of ORE, and, from recent opening, one of a very superior quality was got. The value of this property will be greatly enhanced upon the formation of the intended railway to Ffordd-y-llyn, which must pass through or within a short distance of it. Samples of ore are left at the office of the *Mining Journal* and *Railway Gazette*, 26, Fleet-street, London.

For further particulars apply to Mr. W. H. Roberts, Hendrecoed, Barmouth; and also at the offices of Messrs. Owen and Griffith, solicitors, Dolgellau.

ESTATE IN LANARKSHIRE, desirable as a RESIDENCE and INVESTMENT, and embracing a large MINERAL FIELD.—TO BE SOLD, BY PUBLIC AUCTION, within the Royal Exchange, Sale Rooms, Glasgow, on Wednesday, the 17th September next, at Two o'clock in the afternoon, the

ESTATE OF AUCHINGRAY AND WHITESIDE,

situated in the parishes of New Monkland and Shotts—twenty-six miles from Edinburgh, and sixteen from Glasgow, containing between 2000 and 3000 Scotch acres.

The MINERALS are likely to prove of very great value. There is a large quantity of workable COAL of excellent quality, and there are many appearances of IRONSTONE in different places. The Stansmore Railway passes through the lands, which are only about eight miles distant by railway from the large iron-works in the district around Coatbridge.

The MANSION-HOUSE, which is large and commodious, is situated about a quarter of a mile from the turnpike-road from Edinburgh to Glasgow—was built in 1812, and stands upon a rising ground, commanding an extensive prospect, overlooking a sheet of water, of 300 acres, and surrounded by thriving plantations, through which are numerous gravel-walks.—The offices are in every respect suitable and in good repair; the garden contains nearly two acres, surrounded by a wall; and the pleasure-grounds were laid out with much taste, and at great expense, by the late Robert Haldane, Esq.

There are between 300 and 400 acres of wood on the property, laid out for sheltering, and to suit the varieties of the ground. The farms are of different sizes, and in good repair, several of them new, and all of easy access.

There is abundance of game on the estate, and fish in the reservoir, also in the Black Loch, on the north boundary of the property.

An estate so desirable, both as a residence and investment, is rarely to be met with at so short a distance from the two largest cities in Scotland, while its situation in a mineral district, with constantly extending railway communication and its own productions, commend it strongly to capitalists.

A large part of the price may remain in the purchaser's hands.

For particulars apply to R. Haldane, Esq., W.S., 43, North Castle-street, Edinburgh. Mr. Russell, of Eastfield, will give every local information, and the property will be shown on application at the "House of Auchingray."

Messrs. Mitchell, Henderson, and Mitchell, writers, Glasgow, will also afford information to intending purchasers.

MINE MATERIALS FOR SALE.—Early in SEPTEMBER NEXT, will be submitted FOR SALE, BY PUBLIC AUCTION, the valuable MINE MATERIALS AT WHEAL PRUDENCE MINE, consisting of ONE 50-inch cylinder PUMPING-ENGINE, with two boilers, ONE STEAM WHIM, 26-inch cylinder, and one new boiler, with crushing apparatus attached; capstan and shears, 14-inch and other pumps, rods, &c., and a large quantity of other excellent materials—full particulars of which will shortly be advertised.—Dated When Prudent, Aug. 4, 1845.

IMPORTANT TO CAPITALISTS.—TO BE SOLD, LET, TWO EXCELLENT SLATE QUARRIES, situated in the parish of LLANFROTHEN, in the county of Merioneth, about five miles from Portmadoc, where the Festiniog slate are shipped. One of the quarries hath been worked to advantage for many years, and the other may be opened for a trifling expense. These quarries are very extensive, and the slates as good in quality as any of the celebrated quarries of Festiniog, being part of the same vein. They are capable of being worked, by a spirited capitalist, so as to produce large profits.—Terms moderate. Immediate possession.

For further particulars apply to Mr. Maraden, Llanfroth, Beddgelert, Carnarvonshire. (This advertisement will not be repeated.)

CAPITAL, EXTENSIVE, AND VALUABLE SLATE QUARRY, with immediate possession.—TO BE LET, OR SOLD, all that capital, extensive, and valuable QUARRY OF SLATES, of the best quality, now open, and in work, called Rhiewbach, together with the cottages and other offices attached thereto, situated in the parish of PENMACHIN, in the county of Carnarvon. The above quarry has been worked for about twenty years, and is situated within two miles only of the Festiniog Railway, along which is conveyed the slate from the neighbouring extensive quarries to Portmadoc; and, by a comparatively small outlay, a road might be made from the above quarry to the said railway. It is also situated about fourteen miles from Treffry Quay, on the River Conway—an excellent shipping for vessels of large tonnage. The quarry is capable of being extensively and profitably worked by an experienced and spirited capitalist, who will find the above well worthy of his notice—terms liberal. Also a comfortable HOUSE, with an extensive FARM.—For further particulars apply (if by letter, post paid) to Mr. Mouldale, Gwyndy, Anglesey.

TO IRON AND COAL MERCHANTS.—WANTED, a SITUATION AS MINERAL AGENT, or SUPERINTENDENT A COLLIERIES. The advertiser is well acquainted with surveying, levelling, and mapping, and has a practical knowledge of fire damp, and is well acquainted with the minerals of South Wales and the working of lead mines—would have no objection to engage on the continent. The most satisfactory reference as to character and ability may be had for the last ten years. For further particulars apply by letter (post-paid), to "F.", care of Mr. J. Woodward, hat manufacturer, Oldham, Lancashire.—Aug. 12.

A GENTLEMAN, who has been superintendent for the last twenty years of a mining establishment in Mexico, wishes for EMPLOYMENT, either in a SIMILAR LINE, or as SUPERINTENDENT OF A RAILROAD, at home or abroad. The most satisfactory references can be given.—Direct to "J. C.", Post-office, Lower Sydenham, Kent.

WANTED TO PURCHASE, a good SECOND-HAND WATER-WHEEL, either wood or iron—33 feet diameter, 3 feet breast, with head stocks, cranks, connecting-rods, and two bats; also, THIRTY-FIVE FATHOMS of PIPES, 11 or 12-inch bore, with working-barrel and slide pipe.—Address, with particulars, John Tattersall, Pleasant Dairy, Leeds.—Leeds, Aug. 6.

COMB MARTIN AND NORTH DEVON LEAD AND SILVER MINES. Notice is hereby given, that the ANNUAL MEETING of the shareholders in the above concern will be HELD at the Counting-house, on the Mine, on Wednesday, the 20th day of August next, at Twelve o'clock at noon.

C. R. WEBB, Secretary.

ASSAYING AND MINERAL ANALYSIS.—IMPORTANT TO THE PROPRIETORS AND SHAREHOLDERS OF MINES, &c. Messrs. MITCHELL and FIELD'S LABORATORY is OPEN to GENTLEMEN FOR INSTRUCTION in all BRANCHES OF ASSAYING, MINERAL ANALYSIS, and GENERAL CHEMISTRY; ASSAYS and ANALYSES conducted as usual.—For terms address to Messrs. Mitchell and Field, assayers, &c., 5 a, Hawley-road, Kentish-town, London.

THE PATENT GALVANISED IRON COMPANY call PUBLIC ATTENTION to the following, amongst other GREAT WORKS executed with their patent article:

The ROOFS of the NEW HOUSES OF PARLIAMENT, at Westminster. The SLIPS, or SHEDS, for building "first-rates," in the ROYAL DOCKYARDS, at Woolwich, Portsmouth, Deptford, &c. (the latter visible in passing down the Thames, and an object of great beauty, having a centre span of eighty-two feet). The Timber Sheds, and other buildings, in the Royal Dockyards, are also being roofed and constructed with this fire-proof material.

The BUOYS and other MARINE WORKS of the Honourable Corporation of the Trinity House have for two years been CONSTRUCTED with the Galvanised Iron, which resists effectively the action of sea water.

The celebrated ELECTRIC TELEGRAPHES of Messrs. Cooke and Wheatstone are CONSTRUCTED exclusively with the company's Galvanised Wires, &c.

And this indestructible iron, under all common influences—viz., sea water, saline or dry atmospheres, is admirably adapted for

ROOFING in all climates, being Fire, Hurricane, and Lightning proof, if a continuous communication be formed with the earth by Galvanised Iron Spouting attached to the roof. DOCK-WORK, chain or wire rope, bridges, wire fences, fire proof buildings, corrugated doors, shutters, greenhouses, conservatories, and an endless variety of purposes.

Roofs of gas works and chemical manufacturers.

Ship-building purposes—viz., blocks, bolts in heel of copper, and knees.

For chain rigging, wire rigging, and sheathing, it is extensively used, and the following CERTIFICATE, amongst many others, is affixed:

Lloyd's Register, London, February 7, 1845.

The undersigned surveyors to this society did, at the request of Messrs. Malins and Hawlinson, examine the Patent Galvanised Iron Sheathing upon the bottom of the brig *Mary Stewart*, lying in Messrs. Canning, Young, and Co.'s dry dock, Limehouse, and lately refitted from a voyage to the island of Ichaboo, on the coast of Africa, and found it unbroken and perfect throughout the vessel's bottom, and no appearance of corrosion or oxide of iron upon its surface. The iron that had been exposed by puncturing the nail holes had become coated with zinc—the sheathing was nearly clean, and free from marine grass and anemone. It appears to have answered very well during the before-mentioned voyage, and the ship has sailed without it being found necessary to do any repairs to it.

PETER COURTENAY, 2, White Lion-court, Cornhill.

I. H. BITCHIE, 3, Lloyd's Surveyors.

JAMES MARTIN, 5, Lloyd's Surveyors.

The company are prepared to supply all articles required, or execute work of every description.

WORKS—London, at Millwall, Poplar, near West India Docks; Staffordshire, Phoenix, and Lee Brook Iron-Works—from which corrugated iron and every description of iron, galvanised or otherwise, can be supplied; also, from the South Wales Works, near Bridgend, Glamorganshire.

OFFICE—3, Mansion-house-place, London.

CAUTION AND NOTICE.

This GREAT PATENT, like every good one, is invaded, and, by the law's delays (and its miserable state as regards the interests of patentees), the parties are able to evade the consequences some short time longer. The same thing has occurred with other patents. In Neilson's Hot-Blast Patent the invasion went on for years; but one firm only had at last to pay UPWARDS of £100,000 ONE HUNDRED AND TWENTY THOUSAND POUNDS REWALS. BUYERS as well as SELLERS are LIABLE, and the PATENTEES will PROCEED AGAINST all PARTIES who INVADE this—one of the most IMPORTANT INVENTIONS ever brought into use.

Actions are proceeding against Messrs. Morewood and Rogers, Messrs. Walker (Gospel Oak), and many others.

The company take this opportunity of giving the most unequivocal contradiction to the advertisement issued by Messrs. Morewood and Rogers on 8th August.

THE PATENT GALVANISED IRON COMPANY.

—NOTICE. The delay in effecting the cancellation of the patent of this company, on the SCIRE FACIAS issued under the fiat of the late Attorney-General, has been owing to the attorney for the company taking advantage of the patentee's absence out of the kingdom, for obtaining the shortest time to appear and plead. When forced to plead, THE COMPANY'S ATTORNEY PUT IN A FRIVOLOUS PLEA, FOR THE SAKE OF DELAY; but the Master of the Rolls, on the application of Messrs. Morewood and Rogers, set aside the plea, and only let the patentee in to plead again, on the terms of pleading lawfully, or to the merits, and on other conditions.

In the action against MESSRS. MOREWOOD AND ROGERS, THE VERDICT STANDS FOR THE DEFENDANTS, and Messrs. Morewood and Rogers wait only the judgment on the *scire facias*, for taxing and suing out EXECUTION FOR THEIR COSTS. In the action against Messrs. Walker, the plaintiffs have discontinued twice, and paid Messrs. Walker's costs; and the existing action against them waits the judgment on the *scire facias*. No other actions have been brought, except such as the company abandoned without serving the writs, in order to save the paying of the defendant's costs. So much for the Patent Galvanised Iron Company's misrepresentations and falsehoods, as to proceedings against infringers.

In the proceedings against Morewood and Rogers, and Messrs. Walker, and on the *scire facias*, THE COMPANY HAS BEEN BEATEN AT EVERY STEP, and it is only while they can delay the proceedings—which they have done to their utmost power from the commencement—they can have the boldness to hold themselves forth as a patent company. But the Master of the Rolls has now tightly tied them down to a short existence, unless they resort to some new manoeuvre, for the purpose of obtaining delay.

The public will at once perceive that the company, knowing Messrs. Morewood and Rogers' articles to be much superior and preferable to their own, and despising success by fair and honourable means, are driven to the necessity of wilful misrepresentation in advertising, in order, if possible, to effect sales—a course of proceeding much more like the dying throes of a bubble company than the conduct of a respectable mercantile association.

MOREWOOD AND ROGERS, 9, Steel-yard Wharf,

Upper Thames-street.

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PATENT GALVANISED IRON COMPANY.—NOTICE. The Attorney-General has given his fiat, and a *scire facias* has been issued to REPEAL this COMPANY'S GALVANISING PATENT (Sorrell's process), which was tried in February last, before Chief-Judge Thorne, in the cause of Pattison v. Holland, and was found by the jury to be invalid.—May 9, 1845.

FOR ROOFING AND OTHER PURPOSES.

The large WAREHOUSES and SHEDS in the LIVERPOOL DOCKS have had the zinc with which they were formerly covered STRIPPED OFF, for the purpose of being COVERED WITH IT; and the NEW DOCK WAREHOUSES of that city are likewise being COVERED WITH THIS METAL.

It is peculiarly ADAPTED for RAILWAY STATIONS, as forming a light, strong, and incorrodible covering.

This PROCESS is the ONLY ONE by which the QUALITY of the IRON is PRESERVED, instead of being injured; and it is, therefore, so very malleable, that it may be worked up with the greatest ease into articles of all descriptions.

Further information may be obtained on application at the WAREHOUSE.

NO. 9, STEEL-YARD, UPPER THAMES-STREET.

RYE AND THOMAS, MINE AGENTS AND DEALERS IN STOCKS, RAILWAY AND OTHER SHARES. 80, OLD BROAD-STREET, LONDON.

MINING AND RAILWAY OFFICES, 16, CORNHILL. Mr. RICHARD TREDINICK having entered into arrangements with PRACTICAL AGENTS and ENGINEERS resident in the several MINING DISTRICTS, whereby he is enabled to obtain the earliest and most accurate information affecting MINING and RAILWAY undertakings, proffers his services to the capitalist and adventurer in MINES and RAILWAYS, in the PURCHASE or DISPOSAL of SHARES, as also obtaining REPORTS or STATEMENTS with reference thereto.—Reference as to ability and the facilities possessed by Mr. Tredinick will be readily afforded; and the strictest confidence preserved respecting all communications.

MINING AND RAILWAY AGENCY OFFICE, LISKEARD. J. J. TRATHAN AND CO. In OPENING an OFFICE for the transaction of MINING and RAILWAY BUSINESS in LISKEARD, beg to say, that they pledge themselves to act on commission only, and to obtain for all those who may favour them with their orders, the most favourable terms both in buying and selling.

A DAILY SHARE LIST will always be kept for INSPECTION; and every information connected with MINING and RAILWAY MATTERS will be forwarded to correspondents. J. J. T. and Co. will also be glad to employ as permanent AGENTS to INSPECT MINES, furnish REPORTS of any improvements or other circumstances desirable to be known by parties residing at a distance. They have also made arrangements for furnishing PLANS of MINE SETTS, with lodges laid down from actual survey; sections of underground workings, and other drawings connected with mining, on the most liberal terms—and solicit the patronage of the public in these branches.—August, 1845.

RAILWAY SHARES AND MINING SHARES, BY PUBLIC AUCTION. Messrs. LAMOND and CO.'S PUBLIC SALES OF RAILWAY SHARES are held every TUESDAY, at Twelve o'clock.—On Tuesday next, the 19th inst., Messrs. Lamond and Co.

GREAT NORTH AND SOUTH WALES AND
WORCESTER RAILWAY COMPANY.

(Registered Provisionally, as required by Act 7 and 8 Vic. c. 110.)

Capital £2,000,000, in 100,000 shares, of £20 each.—Deposit £1 per share.

PROMOTERS.

Sir John Conway, Bart. Llanbrynmair, Montgomeryshire
W. Watkins E. Wynne, Esq. Penniarth, Merionethshire
John Vaughan, Esq. Penmaen Dovey, Merionethshire
Richard Matthews, Esq. Esqualeifer, Merionethshire
T. Price Anwyl, Esq. Hengaf, Dolgelly, Merionethshire
Lewis Owen Edwards, Esq. Glanarvon, Merionethshire
Thomas Hartley, Esq. Llwyn, Merionethshire
Reginald Powden, Esq. Arthog, Merionethshire
Charles T. Thruston, Esq. R.N. Tregarth, Merionethshire
Lawrence Ruck, Esq. Pantlith, Merionethshire
William Lewis Owen, Esq. Erynn Abbey, Merionethshire
Owen Williams, Esq. Hendreorion, Llanaber, Merionethshire
William Williams, Esq. Caegeon, Merionethshire
The Rev. William Pugh, Mallwyd Rectory, Merionethshire
Lewis Williams, Esq. Fronnion, Dolgelly, Merionethshire
John Davies, Esq. Fronhenod, Merionethshire
John Rowlands, Esq. Taly-lyn, Merionethshire
The Rev. Griffith Owen, Ynllwch, Carnarvonshire
Evan Lloyd, Esq. Masey-porth, Carnarvonshire
Humphrey Jones Evans, Esq. Bronwyd, Montgomeryshire
R. Humphreys Richards, Esq. Llanfair-isaf, Montgomeryshire
David Pritchard, Esq. Cwm-arth, Montgomeryshire
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Hugh Williams Davies, Esq. Rhyl, Montgomeryshire
David Pugh Evans, Esq. Froncilen, Montgomeryshire
Edmund A. Pritchard, Esq. Brynllwyd, Montgomeryshire
T. R. P. Wagner, Esq. Mawr-elied, Cardiganshire
Edward Lloyd Williams, Esq. Gwernant, Cardiganshire
John Beynon, Esq. Adpar House, Cardiganshire
John Probert, Esq. Blaenpistill, Cardiganshire
G. Bowen Jordan Jordan, Esq. Pigeonton, Cardiganshire
James Bowen, Esq. Troedysaur, Cardiganshire
Edward C. Lloyd Hall, Esq. Newcastle-Emlyn
R. D. Jenkins (Major) Cardigan
Oliver Lloyd, Esq. Cardigan
John Evans, Esq. (Major) Aberystwith
Joseph Downie, Esq. Aberystwith
Thomas Jones, Esq. Aberystwith
George Fosset, Esq. Aberystwith
John Taylor, Jun. Esq. Cwm-dhu, Flintshire
W. D. Jones, Esq. M.D. Llwyny, Pembrokeshire
Mark Anthony Saurin, Esq. Kibwendige, Pembrokeshire
W. Price Lewis, Esq. Felindre, Carmarthenshire
Rees Gwyn Thomas, Esq. Llys-newydd, Carmarthenshire
Walter Lloyd, Esq. Carmarthen
George Davis, Esq. (Major) Carmarthen
John Russell, Esq. Risca, Monmouthshire
Robert Blayney, Esq. Evesham, Worcestershire
Robert Blayney, Esq. The Shrubbery, Worcester
The Rev. G. Wood Lloyd, D.D. Netherall, Ashby-de-la-Zouch
Evan W. Morris, Esq. Penbury, Kent
Philip Hartley, Esq. 60, Lombard-street, London
Richard Hartley Lloyd, Esq. 60, Lombard-street, London
John Francis Bacon, Esq. Austinfriars, London
The Rev. David Robinson, Brompton
Henry Cornewall, Esq. Coothall-court, London
John Barclay, Esq. Jeffrey's-square, London
Robert Hart, Esq. Middle Temple, London
W. W. Mansell, Esq. Dorchester-place, Blandford-square, London

PROVISIONAL MANAGERS.

John Russell, Esq. Robert Hart, Esq.
John Rowlands, Esq. The Rev. David Robinson
Robert Blayney, Esq. Henry Cornfoot, Esq.
Evan W. Morris, Esq. Robert Rising, Esq.
John Francis Bacon, Esq. W. W. Mansell, Esq.

ENGINEER.—John Wright, Esq.

BANKERS.

London—Messrs. Hanbury, Taylor, and Lloyds, 60, Lombard-street
The Commercial Bank of London, Lombardy
Bristol—Messrs. Miles, Hart, and Co.
Bath—Messrs. Tugwell and Co.
Birmingham—Messrs. Taylor and Lloyds
Manchester—Messrs. W. Jones Lloyds and Co.
Liverpool—The Commercial Bank of Liverpool
Hull—Messrs. Balkin and Co.
Cardigan—Messrs. Williams and Co.
Aberystwith—Messrs. Jones and Williams
Machynlleth—The National Provincial Bank of England
Carmarthen—Messrs. Wilkins and Co.
Morris and Son
Cardigan—Messrs. Wilkins and Co.
Haverfordwest—Messrs. Wilkins and Co.
Pembroke—Messrs. Blidulph and Co.
Lampeter—Messrs. David Jones and Co.
Swansea—The Glamorganshire Banking Company

SOLICITORS.

London—Messrs. Bush and Mullens, St. Mildred's-court.
LAW AGENTS.

Carnarvon—Messrs. Pidgeon and Powell
Dolgelly—Humphrey Lloyd Williams, Esq.
Machynlleth—Hugh Davies, Esq.
Aberystwith—Messrs. James Hughes and Roberts
Carmarthen—Richard Gardner, Esq.

LAND SURVEYOR—Francis Fuller, Esq. Parliament-street.
SECRETARY—Cape Hanbury, Esq.

OFFICES OF THE COMPANY.—7, ST. MILDRED'S-COURT, POULTRY, LONDON.

PROSPECTUS.

The proposal for a line of railway, intended to connect the north and south of the principality of Wales more closely together, by the most direct route, and to attain at the same time the best point of communication to London and Birmingham, has been decided upon, after full consideration of the practical engineering facilities for effecting both these important objects in the most certain and economical manner; and also, after consulting the views and interests of the principal landed proprietors and inhabitants of towns and seaports in that part of the kingdom. It is with the most careful attention to these objects of paramount interest that the project is submitted to the public, for a line through a country of great natural resources, which is at present wholly unprovided with a railway, or other convenient inland communication.

The railway is proposed to be made with a view to its forming a junction in the most central part of England with the established or projected railways to London, Bristol, Birmingham, Manchester, Liverpool, and the north. It is certain that a line will soon be made, which commencing near the city of Worcester, proceeding in a north-west direction, by Ludlow to Newcastle, and crossing the first range of the Welsh mountains, will be carried through the Vale of the Dovey northwards, probably in the direction of Dolgelly, Harlech, Tremadoc, Porthdinllaen, and Carnarvon.

The line proposed by this company will first be commenced from a point on the Dovey, and proceed through Machynlleth, to the seaport town of Aberystwith, thence ascending the River Ystwyth it will be carried at an easily accessible point into the Valley of the River Teifi to Tregaron, Lampeter, Newcastle-Emlyn, and Cardigan, and by a branch continued to Carmarthen, where it will afford the means of junction with the projected South Wales and Welsh Midland Railways—thus affording also the most accessible and direct communication with other principal harbours of Cardigan Bay—viz., Fishguard, Newport, New Key, Aberystwith, Aberdovey, and Barmouth. It is, however, the intention of this company, in the event of its becoming necessary, to make arrangements for ultimately securing the formation of the line to be continued, in any event, from Machynlleth northwards to Dolgelly, Harlech, Tremadoc, and Carnarvon.

The distance of the line first proposed to be made will be eighty miles. If continued to Carmarthen, it will include an entire line of nearly 130 miles. The principal objects of the undertaking may be thus briefly enumerated:—The establishment of a perfect line of railway between the Menai Straits, and the ports and harbours of Carnarvon and Cardigan Bay (which comprise the entire western seaboard of North and South Wales), and also all the principal towns, mines, and quarries in the several counties of Carnarvon, Merioneth, Montgomery, Cardigan, Pemroke, and Carmarthen, with the immense advantages of a speedy certain inland communication, thereby saving from the Bristol Channel, Swansea, Milford Haven, and the Pembrokeshire docks, to the port of Liverpool.

The facility of the most desirable and rapid means of transport for the great and increasing traffic in slate, iron, lead, and copper ore, coal, lime, timber, cattle, and other live stock, and every description of agricultural produce, which already exists to so large an extent, but which will receive an immense impulse from the convenience and economy of this line of railway. The benefit to the flannel trade of North Wales which will be increased, and the cost price of that necessary staple manufactured article reduced, with increased benefit to both buyer and seller by the advantage of railway transit.

The owners and lessees of the rich and important natural resources of North Wales anxiously desire a cheaper and better communication with the central and southern districts of the principality, to which their minerals will be conveyed in exchange for coal, iron, copper, lime, glass, earthenware, and various other important articles of produce and manufacture, which the latter have the means of supplying in abundance at moderate prices. The interests and prosperity of both will be still further advanced by the most direct transit of their respective products to Birmingham, and the central cities and market towns of England; to Manchester, Liverpool, and the north; to Bristol and Gloucester, and to London, in exchange for hardware, silks, cotton, and woollen goods, hoseery, wines and spirits, and groceries.

The returns of lead, slate, coal, and lime, will alone show an enormous traffic. The Bay of Cardigan abounds with oysters and fish of every kind, and the imports from Ireland into the several ports and harbours, extending over nearly 300 miles of deeply indented sea-coast, are already extensive, and must be greatly increased by such a facility of traffic, to the mutual advantage of the principality and of Ireland. It may further be remarked that at Aberystwith and Fishguard great natural facilities for improvement in the means of communication by steam-boats with Ireland already exist, and only require a sufficient impulse to insure their extension.

The harbour of Aberystwith alone, owing to a skilful and judicious improvement by the erection of its noble pier, has within the last six years been permanently deepened by several feet of water, its bar has almost disappeared, and it has afforded thereby a safe and accessible port of refuge to numerous vessels driven into it by stress of weather in the Irish Channel. It has also more than doubled within the same period the amount of its receipts for harbour dues and other fiscal charges, from the still increasing number and burden of the ships frequenting it. It is, therefore, contemplated to take powers for the further improvement of that and other harbours on the coast, by means of a limited outlay by the railway company. The profitable cultivation of many thousand acres of good convertible land, now lying barren, will be insured by the introduction in abundance, at a moderate cost, of lime, an article so essential but now scarce, owing to the heavy charge of land carriage, for distances often exceeding forty miles.

The increased consumption of manufactured goods from the northern and central parts of England will insure an increased traffic in goods and passengers, and the cheaper supply of salt and various other natural products now much required, will also give an im-

pulse and profitable activity to the manufacture, agriculture, fisheries, and maritime interests of Wales. The land required for the formation of at least two-thirds of the entire line is of so little intrinsic value, being mostly waste or sheep walk, that one principal and usually overwhelming item of the cost of a railway is diminished to within the smallest reasonable estimate. Another remarkable advantage is, that the quantities of valuable slate and stone to be excavated will afford materials of the most useful nature for the purposes of the railway. It is proposed to take land sufficient, and to make the bridges wide enough for a broad gauge line; but it has been determined not to decide the question of the gauge to be adopted, until after a final report of the engineers is made.

Upon the important subject of traffic, the particulars collected from peculiar sources of private local information, and the investigations which have been pursued and are now progressing, warrant the conclusion that this railway is not only likely to return a remunerating revenue to its shareholders, but also, that it is calculated to afford, in an eminent degree, great advantages as well as convenience to the public. It is well known that thousands of travellers and tourists annually visit both North and South Wales in search of health, or for relaxation of mind, which the bracing air and romantic scenery of that beautiful country seldom fail to afford, and that such visitors come principally from the northern and midland counties. It is quite impossible to form any definite calculation of the increase of passenger traffic by the additional visitors to Towyn, Barmouth, Aberystwith, or through Carnarthen to Tenby and Swansea, and other watering-places and favourite spots throughout the principality.

The astonishing increase of passenger traffic from London to Brighton, Dover, and Southampton, since the establishment of railways to those places, appears to warrant the certainty of a great addition to the number of travellers through North and South Wales, when similar facilities are presented by the line now proposed.

Power will be applied for to sanction, by the Act, the allowance of interest at 4 per cent. on all deposits from the time of the first call being made until the line is opened. The subscribers will be held liable only to the extent of their first deposits until an Act of Parliament is obtained, and afterwards only to the amount of their subscriptions.

Until an Act of Parliament shall be obtained, the affairs of this company shall be under the control of the provisional managers, to whom power is given to allot the shares, and to apply the funds of the company in payment of the expenses incurred in its formation, and in the preparation of the plans and sections to be submitted to Parliament.

Power will be applied for in the Act—and in the meantime is hereby given to the provisional managers—to raise an additional capital; to abandon any part of the line, to make branch lines, or enter into arrangements with any other company or companies; and also to nominate the first directors of the company. The Parliamentary contract and subscribers' agreement will be ready for signature on payment of the deposits.

Applications for shares may be made to the solicitors or local agents, or to the following stock and sharebrokers—viz., Messrs. Shewell and Son, Tokenhouse-yard, London; Mr. J. W. Scott, Bartholomew-lane, London; Messrs. Lloyd and Price, Liverpool; Messrs. Ealton and Son, Manchester; Mr. Henry Rudge Hall, Bristol; Mr. Thomas Sandford, Exeter; Mr. J. R. Lane, Birmingham; and Messrs. Tempest and Butchart, Huddersfield; of whom prospectuses and maps may be obtained. Such applications to be made in the following form, with a respectable reference:—

To the Provisional Committee of the Great North and South Wales and Worcester Railway.

Gentlemen.—I request you will allot me shares in the above company, of I and I, to be undertaken to accept such shares as may be allotted to me, on the terms of the prospectus, and to pay the deposit thereon, and also to execute the Parliamentary contract and subscribers' agreement when required. Dated this day of 1845.

Name of applicant
Address in full
Profession or trade
Name of reference
Address

GREAT INDIAN PENINSULAR RAILWAY COMPANY.

The provisional committee desire to announce, that they have, by the last mail, dispatched the manager of the company, Mr. J. Chapman, to Bombay, with full powers and means for taking all necessary preliminary measures; and that, from his presence there, they have reason to anticipate results highly advantageous to the interests of the company.

CITY AND WEST END RAILWAY AND TERRACE COMPANY.—The period fixed by the committee for the receipt of applications for shares having elapsed, and shares being applied for beyond the number that can be allotted, the committee will proceed to the ALLOCATION as soon as the necessary inquiry into the character of the applicants is completed. By order, J. HODGSON, Secretary.

L EICESTER AND TAMWORTH JUNCTION RAILWAY COMPANY.

Capital £400,000, in 20,000 shares, of £20 each.—Deposit £2 2s. per share.

Provisionally Registered, pursuant to 7 and 8 Vic. c. 110.

PROVISIONAL COMMITTEE.

EDMUND PEEL, Esq. Chairman of the Trent Valley Railway

THOMAS BRAMALL, Esq. Mayor of Tamworth, Director of the South Midland Railway

Robert Gardner, Esq. Director of the Trent Valley Railway

John Ridgway, Esq. Director of the South Midland Railway

James Hibbert Wanklyn, Esq. Director of the South Midland Railway

The Hon. Captain Carnegie, M.P. Director of the South Midland Railway

James Walkinshaw, Esq. Director of the South Midland Railway

Richard Greene, Esq. Director of the South Midland Railway

Harvey Wyatt, Esq. Director of the South Midland Railway

Captain Parkinson, Director of the South Midland Railway

The Right Hon. Lord Rossmore, Berkeley-square

Sir William Magnay, Bart. Alderman of London

Sir William Young, Bart. Director of the East India Company

Charles Dickson Archibald, Esq. F.R.S., Regent's-park

Hon. Captain Hotham, R.N., Chairman of the Brighton and Chichester Railway

The Mayor of Lichfield

Thomas George Lomax, Esq. Magistrate, Lichfield

James Grignon, Esq. Charles-street, St. James's-square, director of the Worcester, Shrewsbury, and Crewe Union Railway

James Renshaw, Esq. Lombard-street, London

Benjamin Collett, Esq. Grafton Manor House, Bromsgrove

William Horatio Harrison, Esq. Sunbury

Captain R. Page, Charlton House, near Somerton

Henry Francis Gisborne, Esq. Derby

B. S. Fowler, Esq. Tamworth, director of the South Midland Railway

Shirley Palmer, Esq. M.D., Tamworth

Thomas Barge, Jun. Esq. Director of the Manchester and Southampton Railway

John Barr, Esq. Director of the London and York Railway

Charles R. Jackson, Esq. Director of the Manchester and Southampton Railway

Thomas Critchley, Esq. Director of the North Staffordshire Railway

James Durham, Esq. Director of the Shrewsbury and Trent Valley Union Railway

Joseph Nadin, Esq. Director of the Manchester and Southampton Railway

M. V. Bass, Esq. Burton-on-Trent

John Barker, Esq. Ludley Bank, near Manchester

Thomas Hamilton, Esq. Victoria Park, Manchester

Robert A. Kennedy, Esq. Manchester

James Atherton, Esq. Swinton Park, near Eccles

William Atkinson Gardner, Esq. London

Joseph Bond, Esq. Polesworth, near Tamworth

Major Bamford, Wilmecote, near Tamworth

Robert Hanbury, Esq. Bole Hall, Tamworth

Samuel Robey, Esq. Alcester Priory, Tamworth

John Francis Woody, Esq. Moat House, Tamworth

John Mott, Esq. The Close, Lichfield

John Perks, Esq. Ironmaster, Wolverhampton

Henry Crane, Esq. Wolverhampton

John Dove Harris, Esq. Leicester

William Cox, Esq. Derby and Tamworth

William Breynston, Esq. London

Benjamin Shaw, Esq. Kilburn Priory, Middlesex

CONSULTING ENGINEER—Robert Stephenson, Esq.

SECRETARY—J. E. RATHBONE, Esq.

SOLICITORS.

Messrs. Maples, Pearce, Stevens, and Maples, Frederick's-place, Old Jewry, London

Felix John Hamel, Esq. Tamworth

Messrs. Dyott and Son, Lichfield

BANKERS.

London—Messrs. Glyn, Halifax, Mills, and Co. Lombard-street

MINING REPORTS OF THE NINETEENTH CENTURY.

As a sample of reports on mines, which are occasionally made by the gentry, who designate themselves mining engineers and mineral surveyors, we present to our readers this week a perfect treat, and doubt not they will give us full credit, and duly appreciate the valuable and highly interesting document which we have so fortunately stumbled over in our researches on the Welsh hills. The report, which will be found subjoined, purports to define the mineral products of a tract of ground in the locality of Dinas Mowddwy, in the vale of Cowarch, North Wales, where, we learn, that lead veins and slate quarries, with a dash of copper ore, exist, and hold out the promise of vast returns to those who may be fortunate enough to obtain them. The report, it will be observed, after speaking of a dyke of slate east and west, of two miles in length, states—"That the sett is intersected with lead lodes and branch veins in every direction, and the lead is to be seen on the face of the mountain in at least seven lodes, or veins, varying from two feet to ten feet in width; and there are upwards of ten other lodes unexplored, running north and south and east and west." By which we are led to suppose, that the lodes in this part of the country, like the author, are not at all particular as to where they go, or to what extent; for, as the report says, there are—"branches in every direction." We should have thought this moderately well as a beginning; but the advantages of this sett are so inexhaustible, that we do not appear yet to have come to the cream of them (or the joke), as will be seen further on, if we are to adopt his theory as to the produce of this splendid assemblage of lead and copper lodes, for the veins seem to be perfectly as ubiquitous as they are variable in their produce and directions. It would appear quite clear that, running to and from every point of the compass, and producing every sort of metal, *ad libitum et nauseam*, these mineral lodes hold out great expectations, but it is only right the author should speak for himself; thus, quoth he—"As the lead ore found in the north and south lodes is much impregnated with copper, near their junction with the east and west lodes, I have no doubt but that they will prove very rich for copper in depth." This is certainly *verryrich*, whatever the lodes may prove; for there can be no doubt of the richness of the inventive faculty that could have come to such a conclusion on such premises, but that they will be rich in depth in another sort of question. To prove which, however, the author has furnished us with further arguments, among which we find the following:—"Lead lodes are generally found running north and south, and copper lodes, east and west; therefore, it is my opinion that the east and west lodes will only make lead shallow, as the lead being found at all is in consequence of the lead *oozing* out from the north and south lodes, and crystallising, or forming, in the east and west lodes." Shade of Werner! we really cannot stand this; it is positively too much for us—it is, as Mrs. Caudle would say, *cruel!* Did this reporter on lead mines ever happen to pass through Cardiganshire or Derbyshire? because, if so, we should be glad to know in what part of the country he made the observations that laid down the basis for this general rule. We are aware that lead is found in some of the cross lodes of Cornwall, but we confess ourselves unprepared to adopt the conclusion come to on this point by the author—viz., that the reason the lead is found at all in the east and west lodes, is in consequence of its oozing out from the north and south ones; but, if a doubt could exist in the minds of any sceptic, a reference to the illustrated map, or lithographed diagram, which has been submitted to us, would at once determine the point. We had supposed, in our innocence, and reasoning, from the evidence evinced in the Dinas Mowddwy district, and the one immediately adjoining it on the south, extending in that direction for upwards of twenty miles, including the large east and west mines of Esgairgwm, Dwyngwm, Esgair Hir, and Esgair Fraith, the last of copper and the first of lead on the same lode, which is east and west. Cwmystwyth, Cwmsymlog, Goginan, Darren, the Llismore mines, and Esgair Mwyn, bearing lead from the top of Plenlymon to the level of the sea, that the reasonable conclusion to come to would be just the reverse of our engineer's opinion, who would have us suppose, that lead in this country is generally formed in the north and south veins, being merely ninety degrees? albeit, we do not intend to dispute that the Dinas Mowddwy veins will not be found to make lead shallow—and, possibly, they may be even as shallow as the reporter—although we must deny the existence of anything in the reasoning, which would lead us to the conclusion, that "there is no doubt that they will prove very rich for copper in depth," for, on the contrary, or *vice versa*, we consider this to be just as hypothetical a speculation as any splendid geologist could wish to arrive at. But, let us proceed; we have, we find, a stronger reason for the lower portions of the east and west lodes being full of copper, for, our author says, "I am strengthened in my opinion as to many of the east and west lodes proving rich for copper, by the circumstance, that the pool at the foot of the pool near D, on map, is so highly impregnated with mineral water, that fish cannot exist in them, nor in the streams which flow from them, till they are diluted by other streams, and the gravel and stones in the stream from Arran pool towards Llanyllidwy are covered with a metallic appearance strongly indicative of copper. A reference to the sketch map of the sett and numerous lodes will give an idea of the numerous lodes which intersect it, and it will be seen that, by driving a level or adit on the vein of slate, a great number of lodes will be intersected at the least possible expense, and by continuing the adit across the sett on one of the north and south lodes, all the other east and west lodes will be intersected, so that it is quite impossible to conceive a more advantageous set, as to facility of working, and general position of the mine, than the Dinas Mowddwy Consolidated Mines present, as the deep adit will, if necessary, drain the mine 1000 to 1800 feet below the surface of the mountain, without any cost of machinery—a thing rarely to be met with, and will prove a saving of an outlay of full 2000*l.* in engines, and 1000*l.* per annum cost as compared with mines of the same depth in Devon and Cornwall. The following short description of the lodes proved to contain lead, and others visible which contain either lead or copper, must suffice, till the lodes have been opened, and their contents ascertained.

No. 1. To be seen in Craig, supposed lead.—No. 2. Ditto.
No. 3. Ditto, and has been worked by the ancient miners by a short level driven on the lode, which contains lead, and is very promising. Lead is found laying about on the surface of the mountain, washed down from the craig.
No. 4. A very large lode, full of lead.—Nos. 5, 6, and 7. Ditto.
No. 8. This lode has been recently worked; two levels are driven, a shaft sunk upwards of sixty feet, and the lode very rich; lead worth 82 per cent., and 6 oz. of silver to the ton.
Nos. 9, 10, and 11. Large champion lodes, running north and south, to be seen in the craig. Nos. 9 and 11, not proved, supposed to be lead. At No. 10 lead to be seen at intersection of brook.
No. 12. Supposed to be lead, not proved.
No. 13. Lead lode very large and strong.—Nos. 14 and 15. Ditto.
No. 16. Large fine-grained, silver-lead, has been worked about half a mile to the west of this sett at Craigwin, and makes very rich lead; out to the surface of the mountain, it dips or underlays north, and from the appearance of the ore is worth 30 oz. to 40 oz. of silver to the ton of ore; this rich lode runs through the sett upwards of two miles in length.
Nos. 17, 18, and 19, are very large lodes untried, and are doubtful as to whether they are copper or lead; they dip east, and are to be seen running all down the craig at Arran Mowddwy, 1000 feet deep or more; there are numerous other lodes which I have not had time to investigate, and which must be embraced in my general report, which will accompany my large plan and model of the sett, showing all the lodes.

CONTINENTAL METALLIC INDUSTRY.

A commission was lately formed, composed of Messrs. Berthier, Dumas, and Bocquerel, to examine into the merits of a Treatise, presented to the Academy of Sciences, in Paris, by Messrs. Gaultier de Claubry, and Dechau.
"On the Electro-Chemical Treatment of Copper Ores." It appears that, nine years ago, these scientific gentlemen announced to the Academy of Sciences that they had succeeded, by the means of a very simple electro-chemical process, to extract gold, copper, and lead from their respective ores, without having recourse to a voltaic apparatus, but simply in employing an apparatus worked with iron or zinc.

First of all, this process requires the transformation of the ore in a soluble composition, or liquid, which is easy to be obtained in the place of working, as it is only in these cases that electric force can act to separate the metal from its combinations. If it is copper ore, such as the carbonate, the oxide, sulphur, or double sulphur, which are the most common, they transform into sulphate the two first with sulphuric acid; and the two latter in roasting them—an operation which is performed to great advantage in Mexico, by the preparation of the *magistral*, an indispensable agent in the amalgamation in patio. When once the sulphur has taken place, the ore is washed, and the solution is submitted to the decomposition electro-chemico, in very simple apparatus. If they wish to obtain the copper in blades, or sheets, the apparatus must be so arranged, that the solution may always be at its maximum of saturation. Messrs. Gaultier de Claubry, and Dechau, have succeeded in performing this by the most simple process, as follows:—When they place under, in a vase, two solutions, the one saturated with strong sulphate of copper, the other sulphate of iron, not so strongly impregnated; if in the first one, they place a sheet of copper, in the other a blade of cast metal—communicating with the first one by means of a metallic conductor, there will be obtained a voltaic couple—the action of which is sufficient to decompose the sulphate of copper; the oxygen and the sulphuric acid operate on the cast metal, from which results the sulphate of iron, whilst the copper deposes itself, or adheres to the sheet of copper—forming the negative pole. The copper deposited at first is in the purest chemical state, but the iron becoming more and more abundant, the copper, in precipitating, carries with it iron; it becomes by degrees fragile, afterwards pulverulent, or powder, according as the solution becomes weakened. Whilst this solution decreases in density, that of the sulphate of iron, on the contrary, increases in density, the result is—1. A solution of the normal copper, which occupied the lower part of the vase; 2. A solution of the same salt, less dense, and swimming on the first; 3. A solution of sulphate of iron, very dense; 4. Another normal solution. To remain in its primitive state, and to obtain the copper in leaves, it was necessary to take off the solution of sulphate of copper less dense, and that of the sulphate of iron more dense; it is in this consists the principal improvement of the treating of the electro-chemical process of copper ore by the above-named scientific gentlemen.

Their apparatus is composed of the following:—a wooden case lined with lead, covered afterwards with wax, or any other greasy substance, so as to receive the solution of the sulphate of iron. This case is provided with two apertures; the one above for the introduction of the normal liquor; the lower one serving to expel the dense liquor by means of syphons, or cocks. In the interior, at suitable distances, are placed the boxes, in copper or cast-iron, lined with lead, of which the extremities, or the lower part, is in metal, whilst the outer part is open, and covered with a strong sheeting of pasteboard. An underneath opening leads also by the means of syphons to the concentrated solution of copper, and another one placed nearly on the upper part, permits the running off the weaker solution. In these cases are placed the neutral metal destined to receive the deposit of copper, and between each of them, as well as in the exterior of the two outward cases, are the cast plates that are to produce the voltaic action. Metallic conductors are used to establish the communication between the double parts; and the apparatus is so arranged that at each time there arrives as much of the strong solution of the sulphate of copper as the weak solution of iron, so that the action continues without any great labour. When once the apparatus is got up, it only requires that the leaves of copper should be taken off when they are thick enough, and to replace the metallic plates when they have been dissolved. The running of the liquid is operated by means of the syphons as regards the flowing of the basin, and it is of very little consequence what the cast metal may be, as the worst sort is equally useful. The leaves of copper can be sent immediately to market; and, if passed through the flattening machine, they become equally as hard as the generality of copper that has undergone that process. All the copper that is precipitated is not obtained in leaves or sheets, as there is only about three-fifths, and even the half; the remainder is in pulverised state, or fragments, that undergo melting. The electrical-chemical process for treating of copper ores by the improved method of Messrs. Gaultier de Claubry and Dechau, appear to present great advantages over the former methods; but, it is requisite that these ores should be transformed entirely, and that at a low expense, into sulphates, as the main point is there. If these facilities can be obtained, there is very little doubt of the successful issue of the method.

LANIVET MINE. (From a Correspondent).—The agents at the mine have noted within the last few days considerable improvements in the 60 fm. level, one of whom says—"I really believe we have a good and great mine before us."

FORTUNATE SPECULATOR.—A worthy tailor of Liskeard lately made a suit of clothes for a person who had speculated in South Caradon Mine, and presented his bill in due course, but was provoked to find the debtor was not in a position to pay. Finding the latter party was about to leave England, the creditor dunned him for the amount. As the last resource, the debtor exhibited to him two shares in the then new mine, and said "Take that or nothing; it may be worth your while some day!" The tailor laughed at the payment offered, but "pocketed the affront," and rejoices now to find himself the fortunate possessor of the shares.

THE RAILWAY SESSION.—During the last session the committee of the Houses of Parliament on railway schemes, sanctioned the construction of 2090 miles of new railways in England, and 560 miles in Ireland, the amount required to be raised for the English lines is 31,680,000*l.*, and Ireland 6,800,000*l.*, forming the enormous sum of 38,480,000*l.* This gives for the English lines an average of 15,000*l.* per mile, whilst the existing lines is calculated at the rate of 30,000*l.* per mile. By a return it appears the annual revenue now derived from railways is about 7,000,000*l.* sterling. If anything can show the speculative enterprise and industry of Englishmen and the wealth of this country, it is the above, as capitalists have no channel to invest their funds in to advantage, unless in railway undertakings or mining operations, either at home or abroad.

THE ANGLO-BELGIAN RAILWAY COMPANY.—The able and well-directed prospectus of this company appeared at full length in our last. The following is an epitome of the principal points:—

CONSTITUTION AND OBJECT OF THE COMPANY.—The object contemplated by this company is to complete the existing modes of inter-communication, by railway and canal, throughout Belgium, in every instance wherein the undertaking offers a fair and legitimate remuneration for capital expended, and in which the project shall have obtained the sanction of the Belgian Government.

CONCESSIONS ACTUALLY OBTAINED.—The magnitude and importance of the grants already obtained by this company, or for which they are in treaty, will require a capital of at least 3,000,000*l.* sterling. For the present, the subscription is limited to the amount required to carry out the grants already sanctioned in the last session of the Legislative Chambers, reserving the faculty of creating additional capital as may be required for the grants to be successively obtained by the company. The concessions sanctioned in the last session are—1. The line of railway from Manage, a point in the state line of railway between Charleroi and Brussels, through the rich coal field of "the Centre," to the river Sambre, at or near to Erquelinnes, on the French frontier. The length of the line is about fifteen English miles. 2. The concession of a canal from Mons to the Sambre at Erquelinnes. The short canal, by effecting the junction of the canal of Condé with the Sambre, will unite the basins of the Meuse and the Scheldt, and thus complete the water-communication from Paris to Antwerp, Holland, and the north of Germany. By the law ratifying the concession of the railway and the canal to Erquelinnes, is also granted the preferential right to any line of railway that may hereafter be projected from any point on the Belgian state line in the direction of the Sambre. Treaties are pending for several lines of railway in East Flanders and other parts of Belgium, the particulars of which will be announced in due time.

GENERAL CONDITIONS OF THE GRANTS.—1. The concession of the Railway and the canal is for a period of ninety years for each, without power of repurchase or redemption. The stipulated period for the completion of the railway is two years, and for the canal three years. The grant comprises the free appropriation of the water and the bed of the river Trouille, which runs nearly with the course of the canal throughout its entire length. The upper part of this stream flows through a succession of ravines of great depth, forming a series of natural basins, and capable of being readily converted into reservoirs of immense capacity, by simply damming up, as the sides are the natural rock. The immense head of water thus obtained will not only insure the easy and regular supply of water in the upper level of the canal at all seasons, but the enormous power of a fall of nearly sixty feet may be turned to good account for various manufacturing purposes, and the reservoirs might even supply the city of Mons with water, to the height of the upper floors of the houses. 2. These grants are wholly exempt, during the entire period of the concession, from the payment of any toll, passenger duty, or in short any species of tax or impost whatsoever, either to the state or the province of Hainault, or the communes traversed, in respect of the works themselves, or of the land occupied as the site of them. This is of itself an immense advantage to the company, or rather to the public, upon whom those imposts are ultimately levied, in the shape of a higher rate of charge for the transport of passengers and merchandise. 3. The tariff allowed to be taken on the canal is the highest actually charged on any canal in the kingdom of Belgium; the tariff on the railway is the same as that fixed for all the other railways, with the exception of that on coal, on which an addition of one-eighth over and above the ordinary tariff on coal is permitted to be taken.

CONDITIONS OF THE SUBSCRIPTION.—The "concessionaires," or grantees, have defrayed the expense of surveying, engineering, law, commissions, agencies, and all preliminary costs and charges whatsoever incidental to the obtaining the grants and up to the final ratification of them by the Legislature. They have also provided the caution money required by the Belgian Government, as a guarantee for the *bond fide* of the engagement, and of the completion of the contract. They are responsible to the Government for the carrying out of the undertaking—a responsibility from which the permission to form a *société anonyme*, or Joint-Stock Company, does in no way exonerate them, although each individual subscriber or shareholder in such a company is liable only to the amount of his subscription. The grantees, in consideration of conveying to the company all their rights and privileges, stipulate for a commission of 3 per cent. upon the capital of the concessions sanctioned, and to be sanctioned by the Belgian Government. They propose, moreover, that, after defraying all costs and charges ordinary and extraordinary of the year, the net surplus profits of the undertaking shall be divided as follows:—1. A first dividend after the rate of 5 per cent. per annum upon the capital expended shall be paid to the shareholders, and one-quarter per cent. in lieu of a sinking fund. 2. Three-twentieths shall belong to the "Fondatrices," or their representatives, in the nature of a annual annuity. 3. The remaining seventeen-twentieths shall be distributed *pro rata* amongst the shareholders, in the nature of a second dividend. The present capital (first series) is limited to 640,000*l.* (16,000,000*l.*), in 32,000 shares of 20*l.* each, for the immediate operations of the company. One-half is appropriated to Belgium and France, and the other half to England. Additional capital will be called for, commensurate with the grants successively to be obtained. Each succeeding grant will be amalgamated with the first; so that a shareholder in the first series will be, as of right, a shareholder in all the operations of the company. Moreover, in the allotment of the shares in the future issues, due consideration will be given to the shareholders in the first series, with whom, however, it will be optional to increase their interest. The amount of the present capital, and the proposed mode of increasing it hereafter, have already been approved by the Belgian Government. The capital is payable—viz., a deposit of 4*l.* per share on subscribing; the remainder by instalments, not exceeding 4*l.* per share, nor at a less interval than two months, between the period at which each call shall have become due. The calls bear interest after the rate of 4 per cent. per annum, upon the amount paid up, from the date of the Royal ordinance approving the statutes of the company. The statutes of the company, as a *société anonyme*, fully define the rights and obligations of the shareholders, and limit their responsibility to the amount of the respective subscriptions.

RAILWAY TRAFFIC.—It is at all times interesting to notice the vast change which the establishment of railways is making in our habits, and how, with more enlarged facilities of travelling, the greater part of the population, who never went further from their own doors than their legs would carry them, now become railway travellers; nothing can better exemplify this than the increase in the traffic on the London and Birmingham line since the reduction of their fares in July, 1844. The following is the comparative mileage of passenger traffic—viz. Half-year ending June 30, 1843: passengers, 360,784: miles travelled, 23,395,261: average number per day, 1982.—For 1844: 371,381: 24,664,979: 2040.—For 1845: 615,904: 38,753,260: 3384.

LADY B.—AND HOLLOWAY'S PILLS.—Lady B., the wife of a distinguished lord, was a few weeks since so alarmingly ill, occasioned by a disorder in the liver and stomach, as to induce her physicians to disclose to the Hon. Mr. L., her ladyship's son-in-law, that they entertained but little hopes of her recovery. In this state, and unbeknown to her medical attendants, she was strongly advised to try Holloway's celebrated pills, which she took for only three weeks, when she found herself as well as ever she was in her life. The accuracy of this extraordinary statement can be proved beyond all doubt. Sold at Professor Holloway's establishment, 244, Strand, London, and by all medicine sellers throughout the civilised world.

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THE IRON TRADE AND RAILWAYS IN FRANCE.

Being desirous that the readers of the *Mining Journal* should have the most correct information upon the cause and probable effects of the rise in the price of iron in France, which subject at present occupies the general attention of speculators in railway operations on the Continent, we translate from the *Journal des Travaux Publics* the Editor's remarks, as presenting his views on the consumption of iron, and the probable extension of the railway system throughout France:—"A rise in the price of iron began to show itself in June last at the fair of Besançon, and which continued at the fair of Chalon—white castings were there sold at 150 f. to 170 f.; gray, from 190 f. to 210 f.—therefore, the quotation of iron naturally followed that of castings. This rise was anticipated, as it was preceded by the advance that had taken place in England, Belgium, and Germany, and what is to be wondered at is, that it had not been before. The rise in the prices in England was declared with all that fervour which is created by speculation, and the prices doubled which have been pretty steadfastly maintained. This can be accounted for, that there are those calls upon her, not only for her home demands but for exportation to the different countries towards which she has large contracts to perform. Great Britain has at present more projected lines of railway to be laid down than what she has completed. This system of communication is spreading itself not only in Europe and America, but in Africa and Asia; there will be shortly large lines, or trunks, from one part of India to the other. When one examines all the railways that are to be constructed throughout the world, the great rise of English iron is not to be surprised at. It is not only in rails and other materials for railways that the English forges, or ironmasters, have received very considerable orders, but they have also to supply the demands that are made for iron of every description—sheet-iron, rods, pig, bars, hoops, &c., which is one of the most convincing proofs of the improvements that are making in England in iron, and the great demand there is all over the world for that branch of her industry. The same causes have produced the same effect in Belgium, which had received extensive orders for exportation in consequence of the Zollverein having granted them peculiar favours in the reduction of the custom dues, which has increased considerably the demand for Germany; but, it was impossible for her to fulfil these new demands at the price of 195 f. to 200 f. The crisis that had been so great a few years previous, induced the masters of forges to extinguish a portion of their furnaces, to discharge their workmen, and consume all their ore without renewing it. At present the position has changed; it is no longer the sale that occupies their attention, it is the means of enabling them to execute the extensive orders they have accepted for exportation. They have, therefore, been obliged to rekindle their furnaces, replenish their supplies of ores, and recall the workmen to the mines; but, as they have undertaken other works, it is only by giving them high salaries that can bring them back. We only make these remarks as it is a prelude of what must happen in France, and that very shortly. The rise, therefore, in Belgium is not less than that in England. A Brussels paper lately stated that the reason that had caused the price of rails to rise from 42 f. to 44 f. in 1836, was again showing itself more forcibly, and would be of longer duration, as railways at that period were only experimental; but now they are established nearly from one end of the country to the other, or in progress. If the prices of iron have not followed this movement in France, it can only be accounted for by the delays and apathy that have manifested themselves in all the grand undertakings, and all the improvements in this country which have caused for England and Belgium so great a call for their iron and their mineral productions in general. The indecision that has prevailed for so long a time in the Chambers, and on the part of speculators, on the best system to adopt with respect to railways has been most fatal to its development. We have not a main line, or trunk, that runs from Paris to the frontier; and even the rails of the Northern line, which is the most forward in progress of completion, have not yet been contracted for—whilst England and Belgium are in possession of their principal lines, and are actively cutting the secondary ones, or branches. All this unaccountable apathetic feeling on the part of railway enterprisers in France, can only be that they are fearful that the public wish the works to be executed too expeditiously, which would, consequently, increase the price of labour, and all the different materials requisite for an iron railway. It is not only these new means of communication that will cause a great consumption in iron. There are many other means of industry that promise to be prosperous, but which are very backward in France, and would require a considerable quantity of iron and other metallic productions. The building of iron steam-vessels has taken a rapid turn in England, not only for its superiority over wood, and being much lighter by one-fourth, but more salubrious. We are, therefore, on the point of building in this country a considerable number of iron steamers—the transatlantic packets—the vessels that we shall have to send to the coast of Africa for the suppression of the slave trade, according to the treaty concluded with Great Britain, and also all the vessels necessary for our commercial service, and our Royal navy—the inferiority of which compared with that of England, was most forcibly exposed by his Royal Highness the Prince de JOINVILLE in his excellent pamphlet '*On the Navies of Britain and France*'. The use of iron for building purposes is becoming general throughout France; scarcely can one pass our large towns without being astonished at the wonderful progress that the use of iron has made in all its forms, either cast or wrought. We see columns supporting three to six stories of stone, as tubes for the conveyance of water and gas, and every description of ornament. It is becoming daily more general in every description of buildings; and the disagreements that are continually taking place between the master carpenters and their men, will lead to its general adoption where it can be substituted for wood. It will be seen that the demand for ores is annually increasing, particularly iron. Extensive manufactures are being established in our northern departments, and all the mining districts, to meet the contracts that will naturally be called upon to be entered into. England and Belgium have every facility for the working of mines; their ores and coal beds are closely combined together, so that there is little difficulty of working the one with the other—whilst in France our extensive coal mines have not as yet been explored to advantage, or brought into work—so that many of our ironmasters are obliged to import from England and Belgium, which two countries are inexhaustible both in iron and coal. Iron, therefore, will and must naturally greatly increase in price from the demands that are now made, and the ironmasters in the different districts will not furnish the rails for the railways without they have an advance of 10 to 12 per cent. on the former prices. Therefore, let Government give every assistance they can to this rising branch of industry, and every facility to the mining speculators."

ADMISSION OF IRON INTO FRANCE FREE.—This subject is now undergoing the most serious consideration of the Minister of Commerce. The fact of Great Britain and other countries now so largely extending their navy by the erection of iron vessels, it has become a question of considerable interest with the French Government, whether they are not placing difficulties in the way of improving their own navy by the imposition of heavy duties on foreign iron, as France is even yet an importing country not producing sufficient for their own usual demands, much less any great increase for shipbuilding and other large works. The whole question of the progress of metallurgy in France, the prices of iron in England, Belgium, &c., will be thoroughly entered into, and it will shortly be decided whether iron shall be admitted into France duty free, or whether such duties shall still be levied.

NOTES ON THE MINING DISTRICTS OF SOUTH WALES.—No. I.

We promised, last week, to enter more fully into a description of the principal geological characteristics of Cardiganshire, and, furthermore, to give a general outline of the several mines at present worked, as also those which hold out inducement for the employment of capital.

The mineral district of Cardiganshire is principally constituted of granite, or clay slate, and from the great width of the formation, ranging as it does, from the north, and being on the south overlaid by the Breconshire red sandstone, embraces a space of upwards of thirty miles from north to south. It may thus be reasonably inferred, that its depth is considerable; and we have been led to believe, in looking at the section of Sir Henry de la Beche, made with very minute care and attention with respect to the curve of the strata of the Silurian rocks in this immediate district, that the depth cannot be estimated at less than 2000 fathoms. Reasoning, also, from the evidence of mineral in the rocks constituting the rising ground from the sea-level attained at Goginan, to the top of Plynlimon mountain, lead ore being found in both places, we have a height of nearly 500 fathoms—inconsiderable, in comparison with that of some 2000 fathoms, or more, as assumed by Sir Henry de la Beche, but still sufficient to constitute an important and lasting mining district, being, as it is, some seven or eight times the depth of the deepest Cornish mines. The principal channel of productive lead ground in this important district holds a direction throughout nearly the centre, from south to north, or from 10 deg. to 15 deg. west of magnetic north. But this line of metalliferous ground is so far regular that it would appear singular, yet such is the case, that a thread drawn across the map of Cardiganshire passes over from south to north a great portion of the most productive mines in the county, the lodes running east and west, including Esgarnwyn, Glogfawr, Glogfach, Logylas, Maenarthur, Frongoch, Caenant, Foxes-Path, Gellirizin, Goginan, Darren, Penyefen, and Talybont mines, which brings this range to the sea-coast. There are other mines highly productive some distance east and west from the described line, such as Cwmystwith and Nant-y-Cria to the east, and Grogwynion, Graiggoch, Cwmmeiddion, and Llwminalis to the westward; but it is not improbable that there are other lateral belts of productive ground running on either side, while it is possible that they will be found to be within the range of rock which has already proved so productive. Having thus far briefly observed on that which appears to us deserving of notice in the mineral formation or deposit of the country, we now proceed from Cwmystwith to take the course of the river Ystwith, and thus we arrive at Logylas.

Having left Cwmystwith mine, of which we have since acquired more detailed information, and which we purpose rendering in our next Number, we proceed to give our brief notes from a cursory surface "view" of the several mines. In following the river Ystwith about five miles to the great level driven by Mr. Shelton, some fifty years since, we found, amid much bustle, as is natural and pleasing to a "stranger," a pretty considerable number of girls, boys, and men, with extensive dressing-floors and good dressing machinery, consisting of a 45-foot stamping-wheel, a 20-foot crushing-wheel, 12-foot gibbing-wheel, and a large wheel in course of erection on the same stream, lower down, intended for stamping, crushing, &c.; the whole machinery, supplied with water brought from Llyferrin Lakes, a distance of fourteen miles through a rough country, diverting this stream from the source of the Elan to the Ystwith. The level before-named was commenced driving as a cross-cut to the great Logylas lode, which had been only partially worked at two points—viz., the Logylas East, and Logylas West mines—each being worked from thirty to fifty fathoms in length, and twenty or thirty fathoms deep, which yielded rich bunches of ore. Unlucky as miners occasionally are—for it is not to be expected that good success is at all times to attend them—the level was carried on to a branch of the lode, which was only driven upon two or three fathoms, and, being found unproductive, the trial on this lode with the cross-cut or great level was suspended for many years, the proprietors abandoning the thing as worthless, after an expenditure of 8000 f. or 10,000 f.

After a lapse of time the eastern Logylas was again resumed by a new company, who sunk from the surface on the lode, from which it was found that the great level had stopped only seven fathoms short of the lode. After laying idle nearly twenty years, the mine was again set to work, the lode cut, and a fine bunch of ore found and worked on, from ten to twenty fathoms long above the level, which appeared shortening and declining in depth, but was put down, as we gather, ten fathoms below adit, drained by a water-wheel, and abandoned as approaching nearly to the end, or bottom, of the shoot of ore, at which time (about twelve years since) it appears the mine changed hands, as may be supposed from the former workers calculating on all their chances to be gone.

The adit at the point where it intersected the lode is sixty fathoms deep. The present company, selecting the most promising "measures" to drive on, commenced the forty-four fathom level sixteen fathoms above the adit level, in which, after eighteen months' driving, a fine course of ore was discovered, and opened upon fifty fathoms long, yielding ore to within ten fathoms of the surface. This has been, as we are given to understand, sunk upon forty fathoms below the adit level; the adit and deeper levels have laid open ore ground, under the western part of the mine, and under the supposed exhausted bunch, worked by the former company, a course of ore full 200 fathoms in length, of the finest possible description, being laid open; in addition to which, ore ground, equal to a return of 150 tons per month for more than twenty years to come, leaving large profits, as it has been doing for the last ten years, may be expected; this mine is more than 100 fathoms deep from surface, and the bottom levels hold out as great promise as any above have heretofore done.

Our attention has also been directed to the proposed lines of railway, connected with the principality, and, if we mistake not, we shall be able to render such information from private sources, as to the levels and direction of the line, as will, doubtless, be appreciated by the public—at the same time, that it may lead them to a correct conclusion of the value to be attached to the several projects.

At the Liverpool Assizes, on Thursday last, an action (Prickett v. M'Kenzie) was tried, arising out of the non-fulfilment of a contract for pig-iron; the plaintiff at the time was in partnership with his brother at Manchester, as iron merchants; the defendant was of the firm of Bankier and M'Kenzie, iron merchants, of Glasgow. In September last the defendant agreed to supply 500 tons of pig-iron at 2*l*. 15*s*. per ton, the contract being made by one Andrew, of Manchester, who acted as defendants' agent at Manchester. One hundred tons were delivered on the 7th December, but the remainder had never been supplied, though repeatedly applied for; a written agreement for the sale and purchase was put in. The principal ground of defence was, that Andrew had no authority, which could bind the defendant for the 400 tons, which, however, completely failed, and, under the direction of the learned judge, the jury gave a verdict for the plaintiff, for the difference in the price of iron at the time of the contract and the 9th October, which was 9*s*. per ton.—Damages, 180*l*.

MINERAL EXPORT TRADE.—We extract the following from the declared value of the Exports of the principal Articles of British and Irish Produce and Manufactures, in the five months ended June 5, 1845, compared with the Exports in the corresponding periods of 1843 and 1844:—

	1843.	1844.	1845.
Coals and culm.....	£262,331	£244,147	£337,325
Iron and steel.....	1,019,157	1,239,656	1,335,082
Copper and brass.....	704,840	748,130	746,040
Lead.....	123,195	123,975	102,429
Tin, in bars, &c.....	44,834	33,673	16,424
Tin plates.....	165,728	218,580	257,412
Salt.....	81,613	76,096	67,649

The consumption of coal in France amounts yearly to 52,000,000 of metrical quintals; the quantity extracted from the French mines is under 37,000,000; so that she is obliged to draw 16,000,000 of quintals from England, Belgium, and Prussia. France thus pays for that article a tribute of 15,000,000 francs to foreign countries.

THE MINES OF SAINT DIZIER.—All the foundries have greatly relinquished their fabrication, notwithstanding that there is an abundance of water; some are quite extinguished, others have only one furnace alight. At Marnaval there are only two fires; this arises from the want of ore, and the little demand from the provincial warehouses, which will not allow the forges to be in full work, except at a great loss. Although the produce is small, the price of wrought-iron scarcely maintains itself, at 320 f. for Paris, and 325 f. to 330 f. for the provinces, the 100 kil. (2 cwt.) There is a general stagnation in the trade; at the fair of Beaucaire the iron had, however, a generally better demand.

DEVELOPMENT OF THE MINERAL WEALTH OF IRELAND.

When in the last Number and a previous one of the *Mining Journal* we made some observations on the advantage of railroads in Ireland, in respect to the more ample development of the mineral wealth of that country, by affording facilities of transit of mineral material from the mines working, and to be worked, to ports of embarkation all round its coasts, it was far from our intention to imply that the attainment of this advantage alone would justify enlarged speculation in the construction of such railroads, or to insinuate that their utility would be confined to the affording of such facilities. In treating on the development of the abounding resources of Ireland in the mineral department—resources, heretofore, of but comparatively trifling avail to the national interest, by reason of the difficulty of access to them for want of facilities of conveyance; we considered railways exclusively in reference to this much desired development as one of the sources from which that kingdom must necessarily derive a large portion of that prosperity which it ought to possess, and which we anticipate will follow the construction of railroads throughout its extent, and rendering its products in all kinds as they would be more accessible to the merchant or trader, and more profitable to the producer. The lines of railroad already projected—for those formed, or in progress of formation, are of but partial extent—are, as far as we can judge, by a reference to the map of the country, well planned, and when carried into effect, as doubtless they will be, the stimulus given to trade and commerce, as well as to the embarkation of capital in mining concerns, will be much greater in proportion than that experienced in England upon the introduction of similar modes of transit of goods and passengers. We are induced to make these observations in consequence of a remark in an Irish paper, to the effect that our advocacy of railways for Ireland appear to result alone from our desire to have her mineral resources explored, and that we shut out of view all the other national advantages which are expected to result from them; thereby causing an impression that their utility would be of a confined character, and that the prospect of their being profitable speculations would be at best but doubtful.—But to return to our notice of the mines and quarries of the southern district. Near the manganese mines at Glandore, in the county of Cork, a copper mine was recently opened at the foot of a high cliff forming the termination of a chain of mountains surrounding and overhanging the basin, which forms the upper harbour of Glandore, and on which is situated the little town called Leap. The indications of rich and abundant ore, which presented themselves at the first opening of this mine, were exceedingly promising, the ore taken up being from 30 to 35 per cent.; but, after working it for a short time, the lode, as the miners proceeded, narrowed, and at length suddenly terminated. Another shaft was sunk at a few yards distance from the first, but, after penetrating some distance, although favourable indications were observed, the miners did not fall in with the original lode, which was supposed to be only interrupted by the interposition of a vein of hard stone where the miners left off in the first shaft, and which would be again discovered by cutting in an angular direction to it. The parties who speculated in this exploration, and who are resident gentlemen, having an interest in the land upon which it was made, either discouraged by the expense already incurred in it, or, perhaps, not in a pecuniary position to continue it effectively, abandoned it; but with a professed determination to again resume the working under more favourable circumstances, which we presume to be the obtaining of the capital necessary to follow out such a speculation.

Here, again, the want of capital in Ireland to take advantage of her mineral resources is exemplified. There can be no doubt, judging from the indications, that there is in the immediate locality of this exploration rich copper ore; and its abundance can only be tested by perseverance in exploring for it, perhaps not much further than has already been done. The proprietors of this mine, if it turned out well, would have the almost peculiar advantage of shipment of the mineral from the very mouth of the shafts—the stony and earthy matter produced from the working of the mine, forming a quarry at the foot of the cliff, and projecting into deep water, scarcely ruffled, even in stormy weather, so sheltered is the basin or inner harbour, described above by us, by the mountains which surround it on all sides, except its narrow, but sufficiently deep, inlet. It is a fact worthy of notice, as an indication of the mineral properties of this particular locality, that, about forty years since, a gentleman of the name of Roche, the then tenant of the lands of Glandore, under Lord de Vesey, the then and still proprietor in fee, procured for several years a large quantity of copper ore, by burning to ashes, within those years, an extensive turf bog, which lay in a valley between the hills, at the extremity of which was made the exploration for copper ore, above mentioned, and the elevated ground upon which is worked the manganese mine, described in previous Numbers of the *Mining Journal*. These ashes were shipped for Liverpool, where it sold in the mineral market, as well as we recollect from our communicant's information on the subject, for 8*l*. and 10*l*. ton, according to the quantity of ore it contained. In this immediate neighbourhood, and on a link of the same chain of mountains, are worked the celebrated Benduff slate quarries, yielding a slate in quality equal, if not superior, to the Baugor slate. We have far outrun the limit we had assigned to ourselves in this article, and must, therefore, defer further notice of the mineral resources of the district in question—through which, by the way, a railroad is to be shortly constructed, until another occasion.

We have seen a copy of "A Letter to the Right Hon. the President of the Board of Trade, on the Illegal Nature and Pernicious Tendency of a System in Operation in the Mines of Great Britain and Ireland, known by the name of Jobbing,"—by Thomas Irving Hill. Mr. Hill is a Cornishman, and expresses himself anxious to redeem the character of his native county, which has, he asserts—and we are free to confess it—suffered much from the system which he deprecates; we give him full credit for his motives, but doubt much the possibility of effecting a radical change. He very ably exposes the operation of "riggery," as it is termed, of Cornish mines or shares, through the agency of unprincipled persons resident in Cornwall, aided and assisted by a London party—we think the quotation he applies to the latter severe, but we are afraid too well founded—we extract, *Artem habent sine arte, partem sine parti quorum medium est mentiri vita eorum mendicatio ire*.—He then enters into a very minute detail of facts, stating at length instances of gross frauds and impositions on persons of standing and importance in the commercial world and in private life. He, however, bears testimony to the fairness of mining in general, when legitimately conducted, and makes a pleasing contrast of the principle on which mines are carried on under the superintendence of Mr. John Taylor, with that which presents itself elsewhere. We are sorry we cannot enter more fully on the subject of this letter, which, however, we hope Mr. Hill will cause to be published; we conclude with the following extract:—"Unproductive, instead of productive, labour, is fostered by the system—of the labouring class, who should be stimulated by all legal means in their exertions to obtain the comforts and enjoyments of life—of this class there are instances of common miners advancing themselves to great wealth, at the expense of their own characters and of the county of Cornwall, with which they become identified, whilst it diverts the attention of capitalists, which would be otherwise directed from a less to a more profitable employment, and prevents the development of much national wealth."

At the Flintshire Assizes, an action was brought by Mr. John Davis against Mrs. Crockford, the widow and administratrix of the late Mr. Crockford, to recover 5000*l*. for coals taken by Mr. Crockford from under property purchased by the plaintiff in the year 1839. The property in question was originally leased by Sir John Hammer to a person named Scott, and afterwards acquired by Mr. Crockford from the assignees of the latter, under an assignment and conveyance of the interest so leased. The colliery leased by Sir John Hammer was known by the name of the South Mostyn Colliery, and run up to property belonging to Mr. Crockford, called the Abbey Colliery, and it was for having underworked this latter colliery into the boundaries of the former, that compensation was now sought for. The Abbey Colliery had been worked a little before Mr. Crockford came into possession in 1839, but on his taking it, the works were conducted with greater activity and vigour, and a pit was sunk very near the boundary line, which separates the two collieries. In December, 1841, Mr. Bagnall, a mining engineer, made diallings above and below at the Abbey Colliery, and found that Mr. Crockford had overworked his mine to the extent of 273 yards. An action of trespass was brought in 1844, but was left a *remainet* at the assizes, and in about a month afterwards Mr. Crockford died, proceedings were, therefore, taken in the present form.—After the examination of several witnesses, an objection was taken by the defendant's counsel that the plaintiff had no title; in this the judge concurred, and the plaintiff was nonsuited.

Original Correspondence.

IMPROVED MANUFACTURE OF CAST-STEEL.

SIR.—In the *Mining Journal* of the 1st of March last, there appeared a notice, headed "Improved Manufacture of Cast-Steel," in which it is stated, that a process had been discovered, by which cast-steel could be produced at a cost not exceeding that of pig-iron, of a quality suitable for the manufacture of steel. The process here alluded to has now been secured by a patent; but as the specification of it is not yet enrolled, a description of it must be deferred for the present. It may be sufficient, at this stage of the matter, to state, that if the cost of pig-iron, of a quality suitable for being converted into good steel, be 6d. a ton, the cost of cast-steel, made by the new process, with such pig-iron as the basis of the manufacture, will not exceed 6d. a ton in the ingot; the explanation of this apparent paradox must be reserved for the future; the premises are taken for granted at present. The cost of such steel, in forms suited for consumption, will vary with the purposes for which it is intended; the cost of tilting steel, including waste, may be taken at 6d. a ton, on an average; the cost of rolling steel is much less, and, for large sizes, will hardly exceed the cost of rolling bar-iron; including waste it would not exceed 1d. a ton, for very large sizes.

By the process now universally in use for making cast-steel, there is a difficulty in making a single mass of any considerable weight; the ingots in general use are formed from the contents of one crucible, the average weight of which does not exceed 30 lbs.; when a mass of cast-steel of greater weight than this is required, the contents of several crucibles must be poured into one mould—an operation involving much trouble, and great skill, and not always successful. By the new process masses of cast-steel of any size, or form, may be made with facility and certainty. Among the numerous novel applications, to which the enormous reduction of the cost of cast-steel effected by this process must have, one of the most important will probably be that of rails; there will hereafter be no difficulty in making rails entirely of cast-steel, of any size that may be required, and of any form that can be produced by the operation of rolling; and the cost of such rails would not exceed that of rails made of good malleable iron. My object in now addressing you, is to obtain, through the medium of your Journal, the opinions of qualified judges, upon the proposal to substitute rails of cast-steel for those at present in use, made of malleable iron. The advantages which a rail made of steel would appear to me to possess over one made of malleable iron, are:—

1. Much greater strength to resist impact.

2. Much less liability to wear by abrasion.

3. A great reduction of friction between the wheel and the rail.

The exact relative capacity of rolled bars of steel and rolled bars of iron to resist impact, can only be determined by experiment; the determination may already have been made, but, if so, I have not been able to meet with it in books; my own observations lead me to infer, that the capacity to resist impact of a bar of rolled steel, allowed to cool in the air, will very much exceed that of a bar of malleable iron; such a bar would be little, if at all, more elastic than bar of iron. The strength of the steel bar would be much increased, by first hardening it, by plunging it into water, as it came red-hot from the rolls, and then letting it down to nearly a blue temper, by immersing it into a bath of oil, or of fusible metal, the boiling point of which would be found most suitable for the purpose. In this state the rail would possess considerable elasticity, and this quality would be objectionable were it to be laid upon isolated supports, or chains, but this objection would probably not apply to such a rail, laid upon continuous bearings, similar to those in use on the Great Western Railway.

The capability of a steel rail to withstand abrasion, especially from the transit over it of a steel tyred wheel, would, probably, very far exceed that of an iron rail; it has been stated, that a steel tyred wheel running on a wrought-iron rail produces enormous abrasion of the latter; a steel tyred wheel on a steel rail would probably reduce the wear and tear of both, to a fraction of the amount at present existing.

Opinions vary much as to the effects of friction upon railways; where the tractive power is locomotive it is maintained, that without a certain amount of friction, the wheels will slip round, instead of progressing—granted; but instead of producing this friction by asperities on the rail, ought it not to arise from vertical pressure, bringing the wheel and the rail into the closest possible contact? In order to produce this effect, the weight of the engine must be greatly increased, and the limit to this increase, at present, is the capability of the iron rail to resist the crushing effect of the weight of the engine. Upon a steel rail of the same size as the malleable iron rail now in use, it is probable, that a locomotive engine of far greater weight and power than any yet constructed, might be advantageously used, to produce the cohesion necessary to impart progressive motion on a steel rail; and that when the *vis inertiae* of the motive power was once overcome, the diminution of friction between steel tyred wheels and a steel rail, would enable such an engine to produce a much more useful effect, from the same expenditure of power, than has yet been accomplished on iron rails.

It is upon an atmospheric railroad, however, that the advantage of a steel rail would appear to be most obvious; how every contrivance for reducing the friction between the wheels and the rails must add to the efficiency of the apparatus: the tractive power, in this instance, being independent of the rails, the greater smoothness that can be imparted to the surfaces of the latter, and that of the tyres of the wheels, the greater will be the effect produced by the tractive power, with the same expenditure of force. These remarks are offered by one who makes no pretension to scientific acquaintance with the subject, in the hope of eliciting the opinions of those who possess such knowledge, upon a matter, which, at the present moment, is one of engrossing interest.—CHALYBES: London, August 12.

CAUSES OF EXPLOSIONS IN STEAM-BOILERS.

SIR.—In the *Mining Journal* of last week your readers are informed that "Dr. Ryan, in a lecture delivered at the Royal Polytechnic Institution, after some interesting details connected with the principal causes of explosion in steam-boilers, and in connection with the overheated state of flues and resulting accidents—the Doctor is thus reported to have given it, as his opinion 'that the maximum point of evaporation was much below the red heat of iron—being, in fact, no higher than 400 deg. Fahrenheit—therefore, until the metal cooled, no explosion could take place.' As explosions of steam-boilers are, for the most part, serious accidents, to distinctly trace their cause, and, if possible, point out a remedy, cannot ill become any one who hath turned their attention to the subject; to do this most effectually, it is desirable that we do not too hastily apply experiments, conducted under certain circumstances, to explain effects produced under circumstances considerably changed. I submit to your scientific readers whether it be highly probable that the experiments, brought to sanction the conclusion that the metal of the boiler must first cool down to 400 deg. ere explosion can take place, are not of themselves insufficient for such purpose, supposing boilers working under a pressure of 45 lbs. to the inch: for, if I understand those experiments aright, they were made under no pressure but the atmosphere; this being the case we require to know what modifications the pressure equal to three additional atmospheres, and 83 deg. increased temperature due to the aforesaid pressure, would have in diminishing the repulsive action observable between the hot iron and the water. The above institution and able lecturers merit the highest praise for the agreeable and ennobling entertainments they afford their visitors, together with their presenting to the inquiring mind a valuable compendium of the views and experiments of scientific men, yet it is possible that the aptitude for generalising and explaining effects somewhat beyond the range of particular experiments, may have a tendency to mislead, by inducing us to rely upon the lesser evidence—while we may obtain that which would be more to the purpose. With this thought in my mind, I was induced to make the following experiments, to form a practical estimate of what quantity of water any given surface of hot iron would convert into steam in a given time, at heats commencing with a rather dark red by daylight, and descending to about 500 deg.; and in the second experiment, commencing with 500 deg., and descending to the temperature at which the water ceased to boil; in the first experiment I found 3 oz. of water converted into steam in thirty seconds by twelve square inches of surface; and in the second experiment, the same quantity of water was converted into steam in eighty seconds, by the same surface. On applying these experiments to illustrate further some remarks of mine given in the *Mining Journal* of July 5, in which I have assumed forty-five square feet of surface so heated, we find that thirty-six seconds would convert 120 lbs. of water into steam at the higher temperatures, and ninety-five seconds at temperatures commencing at 500 deg., down to the temperature at which the water ceases to boil. The results arising from the aforesaid experiments show that steam, under such circumstances, may be generated with such rapidity, that if we even double the time indicated by these ex-

periments, it is then a cause quite equal to produce such effects as boiler explosions. I am not here questioning the experiments referred to, only in their being made the basis of the conclusion that steam cannot be generated with sufficient rapidity, until the metal attains 400 deg. In my own experiments, I found at the dark red heat it required twenty seconds to convert 1 oz. of water into steam, and on its just passing to an invisible heat, 1 oz. of water was converted into steam in fifteen seconds; but on its passing from 500 deg. to the temperature at which it ceased to boil, it took thirty seconds to convert 1 oz. of water into steam. It seems to me highly probable that at red heat the water is prevented from coming into immediate contact with the iron, by an atmosphere of steam, which we may suppose to be formed by the radiant heat—as at these high temperatures the effect is very obvious, when a small quantity of water is put into the hot vessel, it then rolls about like quicksilver, but this effect diminishes as the quantity of water is increased, thus indicating, that under great pressures, as in the steam-boiler, this peculiarity would be much diminished.

Birmingham, August 13.

T. CRADOCK.

Errata.—In my communication on Mr. Nasmyth's invention, p. 390, col. 1, nineteenth line from bottom, should have been "by the use of pump," &c., not "by the rising of pump," &c.; and in the article, "Impediments to the Progress of Useful Inventions," same page, col. 3, thirteenth line from bottom of first paragraph, should have been, "as the pointer is moved," not "printer," &c.

THE CRANK PIN.

SIR.—On our voyage from Antwerp to Hull we had the misfortune to break one of the crank pins. This occurred at three o'clock A.M.; and, after struggling with one paddle till nine o'clock, we cast anchor on the coast of Norfolk, where the detaching of the adhering fragment of the old pin, and the adaptation of the new one, occupied a period of not less than thirteen hours—a very serious loss of time, and, in my opinion, a very needless and unnecessary one. One end is a complete and immovable fixture—the other fits loosely; now, surely, the former might be equally loose, and as easily detached; and a pin, with its nut and screw, might be used to render it immovable, and thus prevent the long and tedious process of expansion, by the continued application of braziers of live coal, which must be repeated for the insertion of the new pin, as well as the extraction of the old. Other plans might be easily suggested; and, at any rate, nothing can be more discreditable to mechanical ingenuity than the present mode of construction.

J. MURRAY.

Portland-place, Hull, Aug. 7.

THE RECENT FIRE DAMP EXPLOSION.

SIR.—The most hopeless of all hopeless subjects is that of any amelioration in the safety of working coal mines. Though entire changes in the system of working coal, and improved and increased ventilation, be imperiously called for, the question seems to be allowed by the Government of the country and the British senate, to "slumber and sleep," as if the lives of multitudes of human beings, incessantly on the verge of destruction, were unworthy of a thought.

The noblest boon of existence is *life*, because its ultimate destinies are immutable and immortal, and this question is neglected, or "set at nought"—

aye! and its suspension held to be unworthy of the "tribute of a sigh"—while the plaything of aristocratic pride, or the gewgaws of tinselled orgogance, are held to be "the one thing needful;" and all this, too, in a country which calls itself *Christian*, or which may be, some of these days, "most *Christian*"—the adopted expression of Roman Catholic countries!

What, on such a survey, Sir, must be the feelings of the reflective and contemplative mind!—not to speak of the man of feeling and intelligence? Nay, more, you shall find it stated gravely, by a correspondent in your own pages, that these wholesale hecatombs of victims offered to this infernal Moloch do not exceed the average casualties in the lists of accidents! What unblushing effrontry!

"Oh Shame, where is thy blush?" The question is heart-sickening, and any amendment deplorably hopeless. I confess I dislike extremely your paragraph last week, on the recent fatal explosion, which occurred a few days before, in Crombach, Wales; wherein no less that TWENTY-NINE human beings were instantaneously destroyed by an explosion of "fire damp." In this case it is admitted that *ventilation* had been, and was, miserably bad! There is no attempt to disguise the fact. Is this not then, a case of wilful, culpable, and criminal negligence? It ought never to be forgotten that at this moment tens, nay hundreds, of thousands of our fellow-creatures are connected with these subterranean volcanoes, and which may explode at any time. They are "in jeopardy every hour," and none will engage in the rescue? Poor human nature!—most *Christian* indeed. I have said I very much dislike your paragraph, and my honest reason is, that instead of laying the axe at once to the *Upas tree*, to arrest its wide spread desolation, you seem to think, with the author of an almost similar article in the *Sun* newspaper, that the proper use of the "Davy lamp," would, in a great measure, act as a preventive to these incessantly occurring accidents. I boldly answer *never*—and though, as I have stated on a former occasion, I believe that the "Davy lamp," with the shield of mica I recommended, is as good as any other, I repeat *all* safety lamps are decoys to danger, and *ignis fatuus*, which lure to destruction, because they distract attention, and divert it from applying the only infallible remedy to the root of the evil. Besides, you know the "Davy lamp" is utterly condemned as altogether unsafe in its commonly employed form, both by science and practice, and can you forget that the atmosphere which requires a safety lamp, is destructive to the health of the miner?

J. MURRAY.

Portland-place, Hull, August 11.

ON THE SUPPLY OF WATER—FILTRATION.

SIR.—In reading the remarks in the *Journal* of the 2d inst., upon the "Supply of Pure Water" by filtering, and experiments made by an engineer, proving the decrease, I beg to suggest that the objections may be partly remedied

by constructing a number of filters, so as to allow the water to pass through the medium into reservoir, and the medium, sand, &c., may be, as required, thoroughly cleansed from impurities, or renewed as required, without interfering with the cleansed water.

The mode might be something similar to this—a large excavated basin to be surrounded by masonry, at the necessary distance

another wall of masonry, between which let the media be placed, and the impure water be conducted, draining below the reservoir. The impure water even might be occasionally made the means of cleansing the very media, is

destructive to the health of the miner?

AN OCCASIONAL READER.

The anniversary dinner of the Iron, Hardware, and Metal Trades' Pension Society, took place on Tuesday last, at the London Tavern, R. W. Kennard, Esq., the large ironmaster and railway proprietor, of Thame-street, in the chair, whose munificent patronage of this excellent institution, and whose energetic and pleasing deportment in fulfilling, for the second successive time, the duties devolving upon him in that capacity (in the absence abroad of the president, Mr. Alderman Thompson, M.P.), was the theme of universal admiration and gratitude with the numerous and highly-respectable assemblage of gentlemen, engaged in or connected with the several metal trades, by whom he was supported—setting a forcible example, by subscribing, for himself and family, a second hundred guineas, in addition to his annual subscription and former donation, to the many leading and opulent firms who have not yet enrolled themselves, in support of the praiseworthy objects of a society, rising to great public utility and importance, as was justly observed, with railway speed, and which was fully exhibited by the rapid influx of donations to the hands of the honorary secretary, Mr. H. L. Taylor, who was constantly employed in announcing the lists throughout the evening—the amount declared being between 200l. and 300l. A gentleman connected with the iron trade from Lisbon, who had arrived only a few days in London, after an absence of twenty years from England, attracted by the advertisement he had read of the meeting, voluntarily attended and gave a handsome donation. The dinner, supplied by the renowned proprietors of the London Tavern, was of the most liberal and handsome description; the conviviality of the evening was maintained in a very spirited manner by some excellent speeches, and the presence of Messrs. G. F. Taylor, Kenny, Moody, and Smith, professional gentlemen, added greatly to the pleasure of the evening, not forgetting the "good fires" of Mr. Toole, jun., the toastmaster. The original founders and the committee of stewards must have felt highly gratified at the success of their exertions in behalf of their infant society, which has been established for the purpose of granting pensions of twenty guineas per annum to decayed members, and fourteen guineas per annum to their widows. The contributions by members filling situations having been reduced at the last general meeting from 21s. per annum to 10s. 6d.—thereby evincing, on the part of the committee who recommended it, a strong desire to enrol amongst its members that class of individuals who would be most likely to require its benefits.

NEW IRON PLATE PUNCH.—We have received a communication from our correspondent, Mr. A. T. J. Martin, of Penzance, recommending a punch for cutting holes in iron plates, on the eccentric principle adopted by Mr. Thorneycroft, in his iron plate shears, described in the *Journal* of the 5th ult. The plan he suggests is, to fix the punch at the end of a powerful lever, exactly over the bed of the anvil, on which the iron to be punched traverses in such manner as to move with a velocity exactly proportionate to the distances the holes are required apart; the other end of this lever is to be connected with an eccentric motion and fly-wheel, worked by the steam-engine or other power, and thus keeping up a continuous, powerful, and regular punching motion; the other details, such as the guides for the sheet-iron, hole in the anvil for the scraps, &c., can be easily understood by our mechanical readers.

PARSEY'S COMPRESSED AIR-LOCOMOTIVE.

Among the numerous systems which have been proposed for using compressed air as a motive power, the great difficulty has been to prevent that continual decrease of its power which must ever take place when it is admitted at once from the magazine attached to the locomotive to the pistons, acting on the cranks and axle of the driving-wheels. The principle of compressed air as a prime mover, has we may safely say, for ages been promulgated, and in modern times extensive mathematical calculations have been made, and algebraic formulæ laid down, to denote its power, and the loss of force sustained from this very cause—the decrease in its elastic force, in proportion as its density decreases; and although several attempts have been made to overcome this hitherto insurmountable bar to its practical use as a motive power, we believe none have yet been successful. Mr. Parsey, of Spur-street, Leicester-square, is another candidate for the honour of successfully and economically applying this mighty power, which nature has placed around us and at our disposal, to the purposes of locomotion, and, indeed, should the plan succeed, it may be applied to almost every conceivable purpose where power is required. We have been favoured during the week with an inspection of the working models by which the patentee illustrates his invention, and what has ever appeared a bar to the use of compressed air, not to us only, but what some of our first engineers have endeavoured to surmount without effect, after years of study and toil, certainly appears here to be overcome in a most simple and beautiful manner. The locomotive carriage consists of a pair of cylinders, piston, acting on the cranks of the driving-wheels in the usual manner; behind these is the reservoir of compressed air, in front of which is a vessel called a receiver, to which is attached a self-acting regulator; the self-acting regulator consists of a small cylinder and piston let into the top of the receiver, and immediately in contact with a nicely regulated valve in the pipe which conducts the high-pressure air to the receiver; attached to the rod of this small piston is a spiral spring coiled around it, and actuated by a screw outside, in such manner, that the person in charge of the engine can, though the amount of pressure in the reservoir be ever so great, regulate the force to any point he requires—for instance, supposing the reservoir is charged at starting to 100 atmospheres, and it is required to work the engine at only four, which would be generally sufficient, the index is set to the proper point, and the air turned on, and should any obstruction occur in the working, by which there would be a tendency to increase the pressure in the receiver, that extra pressure immediately raises the piston and closes the valve; on the contrary, should there be an escape from any of the working parts which would tend to lower the density, the spring forces down the piston and the high-pressure air rushes in and preserves the equilibrium, until both the contents of the reservoir and receiver are of equal pressure.

Some analogy may be drawn between this arrangement, and that of a self-acting apparatus for filling boilers from a cistern, or the regulators in use at the large gas-works. Mr. Parsey's plan is, to have stationary engines where the condensed air can be generated at leisure; the engines will be thus filled when required, and which, he states, can be completely effected in one minute. There is certainly a degree of simplicity yet scientific truth in the arrangement. Mr. Parsey has, doubtless, come nearer the practical accomplishment of this important theorem than any plan we have before noticed; and should it be found, in carrying out the plan on a full working scale, that the cost of power required to compress the air is so small as to cause the economical working of the trains, a complete revolution must be effected in our railway system, as the wear and tear, and numerous other expenses, would be reduced to a mere fraction of what they are at present, many of the present causes of accidents removed, while any speed might be secured which could possibly be required.

BODMER'S PATENT LIFTING-ENGINE AND WINDING GEAR.

Mr. Bodmer, of the Britannia Foundry, Manchester (who has, on former occasions, obtained patents for improvements in the steam-engine), has favoured us with the drawings and description of certain improvements,

which may be applied to locomotives, and in marine-engines, but most particularly applicable in stationary engines for pumping water, raising bodies, and for blowing and exhausting air. Without diagrams it may be difficult to convey a correct view of the entire apparatus, but we will endeavour to give a general description of the improvements, without entering into complex detail.

We will suppose the engine to be applied to a shaft for raising mine stuff, pumping water, &c., the steam cylinder is placed directly over the pumps in the shaft, and the piston-rod coming through the bottom, works direct upon the rods that dispense with the beam and its apparatus; the valve box is fixed to the flat part of the cylinder, and is connected with the expansion cylinder by a branch pipe; the arrangement of the parts are such that the expansion piston performs two strokes, while the pistons in the cylinder perform only one, and, therefore, there is occasion for only one expansion piston, instead of two; a rod connects the expansion principle with an eccentric on the fly-wheel shaft, to which a governor may be applied; the arrangement of wheels and pinions for working the air-pump, &c., is such, that for every stroke of the pistons, the air-pump, force-pump, &c., must perform two strokes, by a system of wheels and pinions, the power is transferred from the descending piston to the ascending one, compelling the two pump-rods to work at exactly the same speed, and exercise no more power upon the descending ram, than what will be necessary to overcome the difference of weight between the descending pump-rods, and the ascending water in the pipes.

Two wheels are fixed upon the shafts, which are strong enough to support the whole weight of the pump-rod and the ram, in case of accident, but in ordinary working they have only to resist so much power as will be transferred from one pump-rod to the other. The fly-wheel is heaviest in that part, where it has to lift the crank pins over the centre, by which means the direct lift from the pistons to the pump-rods, is connected with the crank motion, and enables the engine to be worked at almost any reasonable speed, as there is no fear of the pistons striking against the bottom or top of the cylinders, or the pump valves shutting or opening too suddenly, and the arrangement admits of a much higher lift. In cases where the winding of the coal, and the lifting of the water, has to be performed in the same shaft, a novel arrangement of winding gear is adopted,

the fly-wheel is a spur-wheel, and gears into a pinion on a shaft, on which two bevel-wheels are running loose; on the bosses of these wheels, spur pinions are fixed, which gear into spur-wheels, to which the rope pulleys are either fixed or cast. On the bevel-wheels rims are cast, turned cylindrical on the set screws or arms being brought at right angles with the shaft,

will have forced segments (which are of cast-iron, covered with copper) against the inside of the rim, and thus compel the bevel-wheel to revolve with the shaft. The segments above-mentioned slide with their projections in slots on a disc fixed to the shaft, and which, by a key in its bush, compels the bevel-wheel to revolve with the shaft, and by these means, while one bevel-wheel is in connection with the shaft the other will run loose. It is hardly possible to describe the more minute parts without a drawing, but it is so arranged that the lever above-mentioned cannot be moved from one position into the other, without stopping the winding gear, and the moment the lever is disengaged, by means of a click or by hand, a weight on it stops the winding gear. The guide pulleys are placed in any convenient way above the engine, and over them the ropes are taken in the usual manner. The whole improvements are of the most ingenious description, directly applicable to the object in view, and reflect much credit on the perseverance and mechanical, as well as scientific, attainments of the inventor.

COPPER MINE IN SOMERSETSHIRE.—An undertaking which now bids fair to alter the feature of the beautiful scenery of Kingston, and which promises to be of influence and importance to the interests of Taunton, has been entered upon by some spirited individuals. It has been long thought that the Bloomfield hills are a copper district, and the person who has chiefly directed attention to this highly interesting feature is Andrew Crosse, Esq. A number of men, some of whom are from Cornwall, have been for some weeks at work, sinking, or rather re-opening, a shaft and driving an adit, which was many years ago commenced by Mr. Crosse. Within these few days the miners have come on a fine copper lode, at

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Bank Stock, 210 <i>1/2</i> £	Russian, 5 per Cent., 118
3 per Cent. Reduced Ann., 99 <i>1/2</i> £	Spanish, 5 per Cent., 27 <i>1/2</i>
Compass for Account, 99 <i>1/2</i> £	ditto, 3 per Cent., 38 <i>1/2</i>
Exchequer Bills, 51 53 p.m.	Brazil, 5 per Cent., 99
Belgian, 4 <i>1/2</i> per Cent., 101 100 <i>1/2</i>	Chili, 6 per Cent., 103
Danish, 3 per Cent., 89 <i>1/2</i>	Colombia, 6 per Cent., 17 <i>1/2</i>
Dutch, 4 per Cent., 100 <i>1/2</i>	Mexican, 5 per Cent., 34 <i>1/2</i>
Portuguese, Cov., 5 per Cent., —	Peru, 6 per Cent., 40 <i>1/2</i>

SHARE MARKET.

MINES.—In mining speculation there has been very little doing during the week; the market, however, is pretty firm.

RAILWAYS.—The close of the session has, comparatively speaking, closed the speculative *mania* in these investments, and very few transactions have been entered into; the same stagnation exists on the Continent, which partly arises from the amalgamation of the various companies, so that parties will not embark their capital until they can clearly see the line before them. This system of amalgamation of different companies has the most injurious tendency to depress the market and speculation; we will only allude to the town of Leeds, where, perhaps, there has not been a greater *mania* for railway schemes in any other part of the United Kingdom. Within the present year no less than three companies of associated sharebrokers have started into existence, numbering from 100 to 120 persons, each company publishing daily its own list of sales and prices, and so profitable has been the business that they have realised on an average from 5000*£* to 6000*£* each, during the late session. The unexpected association of the Huddersfield, Halifax, and Bradford Union Railway with the Manchester and Leeds Railway Company, has had the most unhappy effect on great numbers of speculators in shares in that vicinity, but as there has been so much *peculation* it would be rather too lengthy to expose the system—suffice it to say, that there will be many who are victimised when settling day comes. In examining the lists of foreign railways, with a view to their effect upon the circulation, it is estimated that about 10,000,000*£* sterling must be sent abroad (France, Belgium, Germany, Spain, Portugal, Italy, and India) in the course of the present year, on account of the shares held in this country, exclusive of what has already been paid. This fact, which seems incontrovertible, should serve as a warning to speculators to be more than ordinarily careful in their operations, and not to rush into the market on the strength of the facilities which the present state of money affords. There are many who entertain a vague notion that the Bank could afford some assistance in case of a *crisis*, which is most fallacious as that establishment restricted in its monetary operations. The Standing Order of the House of Commons, passed last session, increasing the deposits from 5*l.* to 10*l.* per cent. in railway schemes is not generally understood, as there is an erroneous idea existing that such Standing Order does not apply to companies previously registered, which belief may mislead many, as it must be remembered, on the occasion of the debate on the subject, an amendment, designed to set this limit to the measure, was *lost*—therefore, the deposit is 10*l.* per cent. as it was formerly.—Among the numerous lines projected which have yet to pass the ordeal of Parliament in the next session, there are several of considerable importance. The Manchester and Southampton in particular deserves attention; to the town of Cheltenham this railway must prove of great benefit, and, perhaps, equally so in all its *local* bearings; but it is in a national point of view that it acquires the greatest interest, connecting as it will Manchester, and, in fact, all the north of England, and even Scotland, with the rapidly increasing port of Southampton and thence to Havre, the most important port on the coast of France, by nearly as short and direct a route as could have been marked out had no line of railway existed in its route; the facilities thus afforded for the exportation of articles of merchandise from the manufacturing districts, render this line of the utmost interest to the railway world, and whose progress in Parliament will be eagerly noticed.

The newly proposed South Essex line is one of more importance than at a first view would appear—uniting the town of Burnham, on the River Crouch at the south-eastern point of the county, by not very far from a direct line, Rochford will be brought within thirty-seven miles, and Southend forty from Fenchurch-street; and reckoning from the Pool, Hull, by this route, will be 200 instead of 262, Rotterdam 173 instead of 214, Antwerp 169 instead of 210, Ostend 9 instead of 139, Dunkirk 77 instead of 118, Calais 75 instead of 111, and Margate 42; the Crouch at present forms a good harbour for vessels of large burden, and by throwing out a short pier, a depth of fifteen feet will be obtained at low neap tides. The following is the increase in six months' traffic, ending the present week, as compared with the same period of 1844—viz.:

Eastern Counties	2,782	London and Brighton	£ 5372
Edinburgh and Glasgow	3,341	London and Croydon	1,344
Glasgow and Greenock	2,111	Manchester and Birmingham	3,427
Glasgow, Paisley, and Ayr	2,579	Manchester and Leeds	3,735
Grand Junction	2,519	Midland Company	12,291
Great Western	4,486	North Union	1,332
Liverpool and Manchester	5,322	South-Eastern and Dover	1,3847
London and Birmingham	10,223		

JOINT-STOCK BANKS.—Union Bank of London, 13*1/2*; National Provincial of England, 37*1/2*; Australasia, 32*1/2*; Colonial, 15*1/2*; London and Westminster, 28*1/2*.MISCELLANEOUS.—Peninsular and Oriental Steam Navigation, 74*1/2*; Revolutionary Interest Society, 100*1/2*; Royal Mail Steam Navigation Company, 48*1/2*; Galvanised Iron Company, 10*1/2*.

MESSRS. LAMOND's sale, by auction, of mining shares, at the Hall of Commerce, on Tuesday last, were much better attended than usual, and *bonâ fide* sales were said by Messrs. Lamond to have been effected, and, in some instances, even better prices obtained than those of the day's quotations—the following are the prices handed us:—Tamar, 9*1/2*; Cobre, 15*1/2*; Callington, 27*1/2*; Lamaroo Wheal Maria, 3*1/2*; Tincoff, 14*1/2*; East Wheal Prosper, 2*1/2*; Caradon Wheal Hooper, 7*1/2*; Rhymerne, 35*1/2*; Santiago, 22*1/2*; Wheal Mexico, 5*1/2*; Wheal Albert, 2*1/2*; Crease, 4*1/2*; Wheal Mary, 6*1/2*; Wheal Concord, 8*1/2*; West Wheal Concord, 1*1/2*; George and Charlotte, 5*1/2*; East Tamar, 1*1/2*.

TUESDAY.—The following are the prices of railway shares:—London and Hereford (1*1/2* pd.), 2*1/2*; Dublin, Belfast, and Coleraine (2*1/2* pd.), 2*1/2* 9*1/2*; Wilts, Somerset, and Weymouth (2*1/2* pd.), 5*1/2*; London and Coleraine (2*1/2* pd.), 5*1/2*; Manchester and Bedford (2*1/2* pd.), 5*1/2*; 12*1/2* 6*1/2*; Whitehaven and Furness (1*1/2* pd.), 3*1/2* 6*1/2*; Clydesdale Junction (5*1/2* pd.), 9*1/2*; Dutch Rhineish (3*1/2* pd.), 7*1/2*; West Flanders (2*1/2* pd.), 3*1/2* 19*1/2*; Italian and Austrian (3*1/2* pd.), 3*1/2*; Midland, preference (12*1/2* pd.), 17*1/2*; Oxford, Worcester, and Wolverhampton (2*1/2* pd.), 7*1/2* 9*1/2*; South Wales (2*1/2* pd.), 5*1/2*; Orleans, Tours, and Bordeaux (4*1/2* pd.), 11*1/2*; Paris and Lyons (2*1/2* pd.), 2*1/2* 9*1/2*; Great Western (8*1/2* pd.), 23*1/2*; Stockton and Hartlepool, new (2*1/2* pd.), 2*1/2*; Isle of Jersey (1*1/2* pd.), 4*1/2*; Canterbury and Dover (1*1/2* pd.), 1*1/2* 8*1/2*; East Lincolnshire (1*1/2* pd.), 1*1/2*; Pilbrow's Atmospheric, (1*1/2* pd.), 1*1/2*.

MISCELLANEOUS.—London Gas (50*l.* paid), 5*1/2*; Commercial do. (5*l.* paid), 5*1/2*; Grand Junction Canal (100*l.* pd.), 11*1/2*; Oxford do. (100*l.* pd.), 37*1/2*; Medical Invalid Insurance (2*1/2* pd.), 3*1/2*.

FRIDAY.—Londonderry and Enniskillen (2*1/2* pd.), 2*1/2* 10*1/2*; Cheltenham and Oxford (2*1/2* pd.), 3*1/2*; Belfast and Ballymena (2*1/2* pd.), 5*1/2*; Worcester, Shrewsbury, and Crewe (1*1/2* pd.), 3*1/2* 4*1/2*; London, Oxford, and Hereford (1*1/2* pd.), 2*1/2* 3*1/2*; Whitehaven and Furness (1*1/2* pd.), 3*1/2* 7*1/2*; Jamaican Junction (1*1/2* pd.), 6*1/2* 7*1/2*; Great Northern of France—Bosomel's (2*1/2* pd.), 2*1/2* 18*1/2*; Great Luxembourg (2*1/2* pd.), 2*1/2* 7*1/2*; Scottish Central (2*1/2* pd.), 7*1/2* 9*1/2*; Shrewsbury, Hereford, and North Wales (2*1/2* pd.), 3*1/2* 11*1/2*; Londonderry and Coleraine (2*1/2* pd.), 3*1/2* 5*1/2*; London and South-Western, new (2*1/2* pd.), 15*1/2* 2*1/2*; South Midland (2*1/2* pd.), 6*1/2* 10*1/2*; Leeds and Thirsk (2*1/2* pd.), 14*1/2*; Italian and Austrian (3*1/2* pd.), 3*1/2* 11*1/2*; Harwich—Eastern Counties (1*1/2* pd.), 1*1/2* 10*1/2*; Jersey (1*1/2* pd.), 4*1/2*; Dublin and Galway (2*1/2* pd.), 2*1/2*.

MISCELLANEOUS.—London, Edinburgh, and Dublin Assurance (2*1/2* pd.), 2*1/2* 13*1/2*; Bank of British North America (50*l.* pd.), 4*1/2*; Australasia (40*l.* pd.), 3*1/2*.

LEEDS, THURSDAY.—Owing to the interruption of the holidays since we last wrote, our remarks on the state of the market must necessarily be brief. Within the last day or two the weather has assumed a more settled appearance, and prices strengthened yesterday towards the close of the day in London, but as it is evident that the share market is much influenced by the prospects of the harvest, we do not anticipate any immediate movement for the better; three or four fine days would restore confidence and buoyancy to the market. Midlands, Brightons, Croydons, and Manchester and Leeds, have all given way in price. Foreign stocks, almost without exception, are heavy. A better feeling prevails as to some of the lighter stocks; Matlocks, Ryburghs, North British, are all better, and Edinburgh and Glasgow at 89*1/2* may be included in the same category. West Yorkshires and West Ridings at 14*1/2*, will both, we fancy, improve, and are firm at these quotations. Thirsk have advanced to 16*1/2* per share, with symptoms of a further movement. Goole are inquired for at 42*1/2*. Dewsbury's offering at 27*1/2*. Bradfords, old and extensions, are both flatter, at 53*1/2* and 42*1/2* respectively; they will recover themselves when the call on the extensions is paid. The half-yearly meetings of the various companies already held, have been most satisfactory, particularly that of the Brighton; the working expenses of this line have been only

80 per cent. on the receipts for the past six months, and their dividend upwards of 60 per cent. in excess of the corresponding one of last year.

R. B. WATSON, TOOTAL, & BARRF.

LATEST PRICES OF IRISH STOCKS.—3 per Cent. Consols, 94*1/2* to 98*1/2*; 3*1/2* per Cent. Stock, 101*1/2* to 104*1/2*; 2*1/2* per Cent. Debentures, —; Long Annuities, —; Hibernian Stock, 3*1/2*; Royal Bank, 12*1/2*; National Bank, 2*1/2*; Armagh, Coleraine, and Portrush Railway, 2*1/2*; Belfast and Ballymena, 6*1/2*; Cork and Bandon, 6*1/2*; Cork and Waterford, 1*1/2*; Dublin and Belfast Junction, 7*1/2*; Dublin and Drogheda, 10*1/2*; Dublin and Kingstown, 2*1/2*; Great Southern and Western, 2*1/2*; Irish Great Western, 2*1/2*; Mining Company of Ireland, 14*1/2*; Wicklow Copper Mine, 17*1/2*; British and Irish Steam, 5*1/2*; Dublin and Glasgow ditto, 4*1/2*; Peninsular and Oriental Company, 3*1/2*.

The following are current prices of Railway Shares, not included in the Traffic Table:—

Name of Railway.	Price.	Name of Railway.	Price.
Aberdeen	3 <i>1/2</i>	Oxford and Worcester	7 <i>1/2</i>
Armagh, Coleraine, and Portrush	2 <i>1/2</i>	Perth and Inverness	2 <i>1/2</i>
Bristol and Exeter	9 <i>1/2</i>	Portsmouth Direct	4 <i>1/2</i>
Brighton, Lewes, and Hastings	2 <i>1/2</i>	Richmond and West End Junction	6 <i>1/2</i>
Birmingham and Oxford Junction	4 <i>1/2</i>	Rugby, Worcester, and Tring	2 <i>1/2</i>
Caledonian	10 <i>1/2</i>	South Wales	5 <i>1/2</i>
Cambridge and Lincoln	3 <i>1/2</i>	South Devon	3 <i>1/2</i>
Churnet Valley	5 <i>1/2</i>	Scottish Central	7 <i>1/2</i>
Chester and Holyhead	2 <i>1/2</i>	Shrewsbury and Grand Junction	4 <i>1/2</i>
Corwall	3 <i>1/2</i>	Shrewsbury, Wolverhampton, &c.	4 <i>1/2</i>
Canterbury and Dover	2 <i>1/2</i>	South Midland	6 <i>1/2</i>
Cheltenham and Oxford	3 <i>1/2</i>	Trent Valley	1 <i>1/2</i>
Cork and Waterford	1 <i>1/2</i>	West Yorkshire	7 <i>1/2</i>
Direct Northern to York	2 <i>1/2</i>	Waterford and Kilkenney	2 <i>1/2</i>
Direct Norwich	4 <i>1/2</i>	Weston-super-Mare	2 <i>1/2</i>
Dublin and Belfast	8 <i>1/2</i>	Wiltshire, Somerset, and Weymouth	5 <i>1/2</i>
Dublin and Galway	2 <i>1/2</i>	Wiltshire, Somerset, and Weymouth	5 <i>1/2</i>
Dublin and Mullingar	4 <i>1/2</i>	Worcester, Shrewsbury, and Crewe	3 <i>1/2</i>
Dundalk and Enniskillen	2 <i>1/2</i>	Yarmouth and Norwich	2 <i>1/2</i>
Edinburgh and Perth	1 <i>1/2</i>	York and Selby	7 <i>1/2</i>
Edinburgh and Northern	1 <i>1/2</i>	York and Carlisle	3 <i>1/2</i>
Ely and Bedford	4 <i>1/2</i>		
Eastern Union	2 <i>1/2</i>	Bordeaux and Amiens	11 <i>1/2</i>
Essex and Suffolk	2 <i>1/2</i>	Bordeaux and Toulouse	2 <i>1/2</i>
Great North of Scotland	2 <i>1/2</i>	Ditto, Toulouse, and Cetze	2 <i>1/2</i>
Great Southern & Western (Ireland)	2 <i>1/2</i>	Dieppe and Paris Junction	1 <i>1/2</i>
Great Grimsby and Sheffield	5 <i>1/2</i>	Central of France	17 <i>1/2</i>
Guildford, Farnham, and Portsmouth	3 <i>1/2</i>	Namur and Liege	4 <i>1/2</i>
Harrow	1 <i>1/2</i>	Orleans, Tours, and Bordeaux	12 <i>1/2</i>
Kendal and Windermere	4 <i>1/2</i>	Orleans and Vierzon	16 <i>1/2</i>
Leicester and Bedford	3 <i>1/2</i>	Rouen and Havre	3 <i>1/2</i>
Lincoln, York, and Leeds	1 <i>1/2</i>	Royal North of Spain	2 <i>1/2</i>
London and York	4 <i>1/2</i>	Sambre and Meuse	8 <i>1/2</i>
Lynn and Ely	7 <i>1/2</i>	Tours and Nantes (Stacke's)	2 <i>1/2</i>
Lancaster and Carlisle	3 <i>1/2</i>	Ditto (Leferes)	4 <i>1/2</i>
Londonderry and Coleraine	2 <i>1/2</i>	Verona and Ancona	3 <i>1/2</i>
Limerick and Waterford	5 <i>1/2</i>	West Flanders	3 <i>1/2</i>
London, Salisbury, and Yeovil	2 <i>1/2</i>		
Manchester and Buxton	6 <i>1/2</i>		
Midland, Birmingham, and Derby	1 <i>1/2</i>		
Newcastle and Berwick	2 <i>1/2</i>		
Newcastle New (Branding)			

The Mining Journal.

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ENLARGED SHEET.

[AUGUST 16.

THE ELECTRIC TELEGRAPH.—COOKE AND WHEATSTONE PATENTEE.

The ELECTRIC TELEGRAPH has been adopted on the following LINES:—
BY ORDER OF THE LORDS OF THE ADMIRALTY, on the South-Western Railway, as a GOVERNMENT TELEGRAPH from the ADMIRALTY, Whitehall, to PORTSMOUTH, above NINETY MILES.

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Yarmouth and Norwich Railway, a "Single Way," 20 miles.

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Sir Thomas Digby Aubrey, Bart., Oving House, Bucks

Sir Harry Verney, Bart., Clayton House, Bucks

Hon. Philip Sidney Pierrepont, Evenley Hall, Brackley, Northamptonshire

Edmund Francis Dayrell, Esq., Lillingstone Dayrell, Bucks, High Sheriff of Bucks

Charles John Baillie Hamilton, Esq. M.P., Thame Park, Oxfordshire

Rice Richard Clayton, Esq. M.P., Hedgerley Park, Bucks

John Deering, Esq., Lee, Bucks

George Morgan, Esq., Biddulden Park, Bucks

R. Bullock Marsham, Esq., LL.D., Caversfield House, Oxfordshire

Walter Henry Breridge, Esq., Morville House, Warwickshire, and Chetwode

Priory, Bucks

John Barnes, Esq., Chorley Wood, Herts

W. Osmond Hammond, Esq., St. Albans-court, Wingham, Kent

Benjamin Price, Esq., Westbury, Bucks

Colonel John Hall, Life Guards' Barracks, Hyde-park, London

John Newman, Esq., Brand's House, Hugheenden, Bucks

Thomas Newland Allen, Esq., The Vache, Chalfont, Bucks

Henry William Beauclerk, Esq., 61, Chester-square, London

Robert Fox, Esq., Wendover Lodge, Bucks

William James Bally, Esq., Shenley House, Bucks

Thomas Sands Chapman, Esq., The Park, Aston Clinton, Bucks

Robert Marriott Freeman, Esq., Stoney Stratford, Bucks

George Parrot, Esq., Castle Farm, Buckingham

Humphrey Humphreys, Esq., Buckingham

William Davis, Esq., Bicester, Oxfordshire

Captain William Style, R.N., Bicester, Oxfordshire

John Horwood, Esq., Steane Park, Brackley

John Henry Butterfield, Esq., Brackley

Alfred Horcroft, Esq., Brackley

Charles Tawney, Esq., Oxford

Jonath. Samuel Browning, Esq., Oxford

Henry William Tuck, Esq., London

Timothy Rhodes Cobb, Esq., Banbury, Oxon

Zachariah Daniel Hunt, Esq., Aylesbury

DIRECT LONDON AND MANCHESTER RAILWAY.
OFFICES, 48, MOORGATE-STREET, LONDON.
(PR. VISIONALLY REGISTERED.)

Capital £5,000,000, in 100,000 shares of £50 each.—Deposit £2 15s. per share.

PROVISIONAL COMMITTEE.

The Earl of Mexborough, Methley-park, Yorkshire
The Lord Rossmore, The Dell, Windsor
Colonel the Right Hon. George Lionel Dawson Damer, M.P. 6, Tilney-street, Park lane
Lieutenant-Colonel the Hon. John Craven Westenra, M.P. Sharavogue Castle, Roscrea, Ireland
The Hon. Robert Gore, M.P. 21, Wilton crescent
David Robert Ross, Esq. M.P., Roastrevor, Ireland
John Humphrey, Esq. M.P. and Alderman, Hayes' Wharf, Tooley-street
Wm. Williams, Esq. M.P., Park-square West, Regent's-park
John Dillon, Esq. Fore-street, Cripplegate
Andrew Caldecott, Esq. 20, Cheapside
John Kinnerley Hooper, Esq. Alderman, Queenhithe
Thomas Kelly, Esq. Alderman, 17, Paternoster-row
Thomas Sidney, Esq. Alderman and Sheriff, Leyton House, Essex
Benjamin Oliveira, Esq. F.R.S., 8, Upper Hyde-park-street
Rigby Wason, Esq. Corwan House, near Girvan, Ayrshire
Richard Woodhouse, Esq. 55, Torrington-square
Kenyon Stevens Parker, Esq. Q.C., 46, Gower-street
Thomas Shepperson, Esq. 27, Cheapside
William White, Esq. 109, Cheapside
Thomas Townend, Esq. Manchester
James Kershaw, Esq. Alderman, Manchester
Robert Barbour, Esq. Manchester
Charles Warwick, Esq. 137, Cheapside
Richard Hopper, Esq. Upper Clapton
William Lawrence, Esq. Brixton
John Burd, Esq. Alderman, Manchester
Thomas Longworth, Esq. Manchester
Thomas Price, Esq. Manchester
J. W. Deacon, Esq. Gresham-street and Manchester
Jonas Smith Wells, Esq. 75, Old Broad-street
John Bradbury, Esq. 6, Aldermanbury
Thomas Devas, Esq. 24, Lawrence-lane
William Cook, Esq. St. Paul's Churchyard
John Gladstone, Esq. Stockwell Lodge, Surrey
Charles Townend, Esq. Manchester
J. P. Gassiot, Esq. F.R.S., 77, Mark lane
J. Reeves, Esq. 150, Cheapside, and Leyton, Essex
Richard Groucock, Esq. 5, Bow Churchyard
T. B. Simpson, Esq. Rutland Lodge, Brixton, Director of the Richmond and North Wales Railways
Thomas Vyse, Esq. 3, Cripplegate-buildings
William Rathbone, Esq. Temple
Thomas Winkworth, Esq. 44, Gutter lane
B. B. Williams, Esq. Wyndham-place, Bryanstone square
James Proctor, Esq. Manchester
Henry Farington, Esq. Manchester
Sir John Key, Bart., Alderman, King's Arms-yard, London
Henry Plumtre Gipps, Esq. 9, Montagu-place, Bryanstone-square
William Cash, Esq. 39, Wood-street, Cheapside
Richard Vyse, Esq. Luton, Bedfordshire
Thomas Stokes, Esq. Leicester
Joseph Crimp, Esq. Eastfield House, Leicester
William Bates, Esq. Leicester
Joseph Fielding, Esq. Leicester
Thomas Wood, Esq. Leicester
John Taylor, Esq. Leicester
John Dove Harris, Esq. Leicester
William Bings, Esq. Leicester
Richard Warner Wood, Esq. Knighton, near Leicester
Alfred Burgess, Esq. Brookfield, near Leicester
P. A. Taylor, Esq. Carey-lane, Cheapside
John Welch, Esq. Aldermanbury
H. B. Whitworth, Esq. Northampton
Joseph Underwood, Esq. Commercial Bank, London
(With power to add to their number.)

COMMITTEE OF MANAGEMENT.

Chairman pro tem.—JOHN DILLON, Esq.
Deputy-Chairman pro tem.—ANDREW CALDECOTT, Esq.
Mr. Alderman Hooper
Thomas Shepperson, Esq.
William White, Esq.
William Lawrence, Esq.
Mr. Alderman Sidney
Engineer—John Urpeth Rastrick, Esq.

BANKERS.

London—Messrs. Jones Loyd and Co. Lothbury
Manchester—Messrs. Jones Loyd and Co.
Bedford—Thomas Barnard, Esq.
Stockport—The Bank of Stockport
Leicester—Pare's Leicestershire Banking Company
Northampton—The Northamptonshire Union Bank
Wellingborough—The Northamptonshire Union Bank
Dublin—Messrs. Boyle, Low, Pim, and Co.
JO. N. SOLICITORS.

Messrs. Ashurst and Son, 137, Cheapside
Messrs. Sadlow, Sons, and Tott, 29, Chancery-lane
LOCAL AGENTS.

Messrs. Stone and Page, Leicester
Messrs. Tatham and Son, Highgate
E. L. Brickwood, Esq. Dunstable
Edward C. Williamson, Esq. Luton
C. L. Brett, Esq. Bedford
George Burnham, Esq. Wellingborough
Messrs. Lamb and Nettleship, Kettering
Beauvoir Brock, Esq. Loughborough
Thomas Richardson, Esq. Uttoxeter
George Sawkins, Esq. Leek
Richard Wormald, Esq. Macclesfield
John Boothroyd, Esq. Stockport
W. J. Little, Esq. Devonport
Messrs. Stanley and Wasbrough, Bristol
Charles Naylor, Esq. Leeds

Secretary pro tem.—Edward L. Ogle, Esq.
Parliamentary Agents—Messrs. Parker and Preston, 21, St. George-st., Westminster
The London promoters of this line, in their ordinary commercial operations, now pay for the carriage of goods, &c., a sum equal to four per cent. upon the whole capital—an amount of traffic which will pass upon the Direct Line when completed.

In its course the line will approach to and accommodate the following towns—viz., Barret, St. Albans, Dunstable, Luton, Ampthill, Bedford, Wellingborough, Kettering, Market Harborough, Leicester, Loughborough, Ashby-de-la-Zouch, Burton-on-Trent, Uttoxeter, Cheshire, Leek, Macclesfield, Stockport, and Manchester, terminating in the station of the Manchester and Birmingham Railway.

Applications for shares may be made, addressed to the provisional committee, or to the solicitors, at the company's offices, 48, Moorgate-street, London, of whom further particulars may be obtained.—July, 1843.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Direct London and Manchester Railway,
48, Moorgate-street, London.

Gentlemen.—I request that you will allot to me shares, of £50 each, in this company, and I undertake to accept the same, and to pay the deposit thereon, or upon any less number that may be allotted to me, and I undertake also to execute the Parliamentary contract and subscribers' agreement when required.

Name in full.....
Residence.....
Trade or profession.....
Reference.....
Address of referee.....

Date.....
This company is established pursuant to the following request and authority:—
We, the undersigned, being interested in the trade of Manchester, and in the shortest and quickest intercourse between London and Manchester, hereby express our conviction that a direct line of railway between those places will give the public the greatest cheapness, convenience, and speed.

"That it is of paramount importance to the trade and to the public, that they should not continue dependent for communication with Lancashire upon one, and that a circumitous line of railway.

"That the immediate formation of a direct line is essential, because, if delayed, it will become more and more difficult, in consequence of the branch railways which local necessity will originate.

"That an independent trunk line is necessary to guard the trade and commerce of the metropolis and Lancashire against excessive charges and the many evils of a rapidly extending monopoly.

"We, therefore, authorise and request Messrs. Ashurst and Son, solicitors, and Messrs. Sadlow, Sons, and Tott, solicitors, to take the necessary steps for the formation of a committee, with a view to the adoption of such a line.

Allan and Smith, London
William Allen and Brothers, Manchester
H. Baumer and Sons, Manchester
Robert Bentley and Co. London
John Bird and Sons, Manchester
Robert Barber and Co., Manchester
George Brett and Co. London
J. T. Bassett, London
Burris and Gladstones, London
J. B. Banks, London
John Burris, London
James Bradbury, Manchester
Bradbury, Gatreux, and Co. London
Bowman and May, London
Blair and Burton, Manchester
S. A. Butterworth and Co. Manchester
John Biggs and Sons, Leicester
Caldecott, Powell, and Wilcox, London
Cook, Sons, and Co. London
J. and F. Cowper and Co. London
Courtauld, Taylor, and Co. London
Capper, Morley, and Co. London
Francis W. Coates, London
Cheaper, Watson, and Jackson, London
James Carlton, Walker, and Lewis, Manchester
Richard Cobden and Co. Manchester
Thomas Crompton, Manchester
Darby and Garland, London

James Deacon and Sons, London and Manchester
W. and T. Davis, Minchener, and Rostledge, London
Davies, Freeman, and Co. Manchester
John Dugdale and Brothers, Manchester
Ellis, Evington, and Co. London
David Evans and Co. London
Samuel Fletcher, Son, and Co. Manchester
George Fraser, Son, and Co. Manchester
George Faulkner and Co. Manchester
A. Grant and Brother, London
John and Edward Grandy, Manchester
Edward Granville and Co. London
Gillet, Porter, and Co. London
Gates, Coates, Bartlett, and Co. London
Lot Gardiner and Brothers, Manchester
Hood, Ward, and Hood, London
Henry Hilton, Manchester
Hobday and Cheetham, Manchester
Hoyle and Hanson, London
Richard Harris and Sons, Leicester
Johnson, Bulmer, and Co. London
Jameson and Banks
Kershaw, Leese, and Co. Manchester
Leaf, Coles, Smith, and Co. London
Luck, Castle, and Co. London
Lyett and Davies, London
Luck, Bouch, and Coath, London
John Lart and Son, London
Le Gros, Thompson, and Bird, London
Thomas Lomas and Co. Manchester
Lewis and James, London
Liddiard and Co. London
Lewellen, Truman, and Hitchcock, London
William Lawrence, London
Morrison Dillon, and Co. London
J. and R. M. May, London
McCurd and Haslam, Manchester
James Martin, London
Robert Muriel, London
John Muir and Co. Manchester
James and William Morley, London
Nicholls, Lucas, and Co. Manchester
Ovington, Warwick, and Co. London
Oloyd, Hodgson, and Co. London
J. F. Paws and Co. London
Potters and Norrie, Manchester
Pee, Holmes, and Co. Manchester
John and Nathaniel Philips and Co. Manchester
Puzey and Pallet, London
Reddish and Bickham, Manchester
R. H. Robertson and Co. London
Rhodes and Williams, London
John Read, London
Samuel Ridley, Son, and Ellington, London
Rowlandson and Atkinson, London
Sadler, Fenton, and Co. London
B. Salomon and Co. London
Sturt and Sharp, London
George and James Smith, Manchester
Thomas James Smith, London
W. S. and T. Storar and Co. London
Thomas Shepperson, London
Strachan and Roan, London
Sherwood, Gilbert, and Pipet, London
Townend and Hickson, Manchester
Thomson, Brothers, and Sons, Manchester
Joseph Travers and Sons, London
Todd, Coston, and Co. Manchester
Tattersall and Mellor, Manchester
Tarsay and Millgate, London
George Virtue, London
White and Greenwell, London
Ward and Co. London
Winckworth and Procters, Manchester
Thomas Worthington, Manchester
John Wreford and Co. London
Westram, Dignam, and Co. London
S. B. Watts and Co. Manchester
Wilson, Keith, and Co. London
Wreford and Pugh, London
Welch and Margetson, London."

CHESTER AND MANCHESTER DIRECT RAILWAY,
WITH A BRANCH TO BIRKENHEAD.

(PROVISIONALLY REGISTERED.)

Capital £1,000,000, in 20,000 shares of £50 each—Deposit £2 2s. per share.

COMMITTEE OF MANAGEMENT.

Colonel the Honourable LEICESTER STANHOPE, Ashtonburnham House, London, Chairman

Major JOHN T. CROFT, Regent-street, London, Deputy-Chairman

David Ainsworth, Esq. Manchester

Samuel Barton, Esq. Didsbury, Manchester

Hugh Beaver, Esq. Manchester, and Glynn Garth, Anglesey

John Burgess, Esq. Boroughreeve of Manchester

James Faish, Esq. Lancaster place, London

Major Ford of Bedonkent, Carnarvonshire

Lieut.-Colonel Henry Hanmer, Bear-place, Berks, and 7, Devonshire

place, London

Peter B. Henshaw, Esq. Lower Seymour street, Portman-square, London, a director of the Liverpool, Manchester, and Newcastle Junction

Railway

Captain Sir John R. Hilton, R.N., Isle of Wight

J. Harvey Higson, Esq. merchant, Manchester

Lieutenant-Colonel Hutchinson, B.E.C.S., Director of the College of

Civil Engineers

D. T. Johnson, Esq. Aldermanry Churchyard, London

John Joseph Keene, Esq. St. John's Wood, London, Director of the Na

tional Provincial Bank of Ireland

W. King, Esq. Director of the Freemasons' Life Assurance Company

George Peter Livius, Esq. the Grove House, St. Cuthbert's, and Co.

Well Priory, Bedford

Horace W. Metcalf, Esq. B.C.L., Middle Temple, and Chatham-place

Benjamin Oliveira, Esq. F.R.S., Upper Hyde-park-street, London, a director

of the Liverpool, Manchester, and Newcastle Junction Railway

James Orrell, Esq. Culcheth Hall, Kenyon

James Ogden, Esq. M.D., Manchester

David Price, Esq. Manchester

Major James Waller, K.H., St. James's-square

C. J. S. Walker, Esq. Longford, near Manchester

(With power to add to their number.)

ENGINEERS.

Sir John Rennie, F.R.S.; George Remington, Esq. C.E.

BANKERS.

Messrs. Rogers, Olding, and Co. London

National Provincial Bank of England, Manchester

SOLICITORS.

London—Messrs. Sir George Stephen and Hutchinson, 29, Moorgate-street.

Manchester—Messrs. Higson and Robinson, Cross-street; R. B. Cobbett, Esq.

Marden-street.

Local Agent—Chester: John Walker, Esq.

The promoters of this railway, encouraged by the favourable support which has been given to the project, and in compliance with various recommendations they have received, have determined upon the addition of a Branch to Birkenhead, which, although it will manifestly tend to the advantage of the shareholders and the public, will be attended with comparatively little additional outlay. The project will still retain its chief characteristic of a direct railway, and, by its connection, near Warrington, with the Grange Junction Company, is sufficiently comprehensive, without resorting to a complicated system of branch lines, or materially conflicting with the interests of existing companies.

The line will commence at the city of Chester, and proceed by way of Frodsham, Frodsham, and Preston Brook, to Warrington, thence by Lynn and Stretford, direct to Manchester. From a point on the main line, near Lynn and Stretford, a branch will be taken to the Chester and Birkenhead Railway, so as to unite Manchester, in the most direct manner possible, with the docks now being formed at Birkenhead.

As Manchester, from its geographical position, is the centre of railway communication between Scotland and the most populous districts of England, so Chester, from a like cause, is the great centre of railway communication between the capitals of Ireland and of England. To connect these two points, by a direct and independent line of railway, must, therefore, be of the utmost importance, not only in a local point of view, but to the whole commercial intercourse of the country.

This line will be the most direct route, by Holyhead, to Ireland, and will be in all respects by far the preferable channel of intercourse and transit between Ireland and the great manufacturing districts of England. By the railways connecting Chester with Wrexham, Oswestry, Shrewsbury, Hereford, Gloucester, and South Wales, this will be the nearest route from Manchester to the south-western parts of England, and to the mineral of Monmouth and Glamorganshire. The communication with Bristol, Gloucester, and Exeter, will be speedy and direct.

On reference to the map it will be seen that a very considerable distance will be saved by this line, as compared with the present circuitous routes by Crewe and by Birkenhead—the former being fifty-two miles, and the latter forty-six miles, while the proposed line is only thirty-four miles—saving in the one case eighteen miles, and in the other twelve miles—besides the serious inconvenience, loss of time, and expense, of passing through Liverpool, and crossing the water at that place.

It is confidently expected that this line will be the precursor of another scheme, of no ordinary importance—namely, to render Chester an efficient port for large vessels. This subject was entertained by Sir John Rennie in 1833, and subsequently, in the same year, by the late Mr. Chapman, who wrote an able report upon the capabilities of the River Dee. It was again investigated in 1837 by Sir John Rennie and Mr. George Remington, and the practicability of forming a good navigable channel, for vessels of large burden, together with docks at Chester, was then fully and clearly established.

The entrance channel would commence at Dawpool, which is easy of access (and infinitely preferable, in point of access and safety, to the docks at Liverpool or Birkenhead), for vessels of large burden during eight hours every tide, both at springs and neaps, and the sill of the lock would be sufficiently low to admit vessels drawing twenty feet water to enter at all tides.

This railway, therefore, in connection with the proposed docks, will render to Chester and Manchester incalculable advantages. To the former it will restore to its proper position natural to so important a city; to the latter it will give another outlet by sea to the manufacturing districts, free of the heavy port charges, dues, and risks, to which the produce is now subject. It has not been thought advisable to combine the two objects in one company at present, but, should it be found requisite, the two may hereafter be amalgamated.

Merits of no ordinary degree, therefore, may fairly be claimed for this railway, whether taken in connection with the proposed docks, or as standing alone, combining, as it does, all the advantages of any other line, with this great addition, that it will be the high road to the most convenient port of Manchester, and will be quite independent of any associations or influences that might tend to oppose the growing desire for a means of direct and independent communication between Manchester and the port of Chester.

The line has been carefully examined. There are no difficult earthworks to be encountered; on the contrary, it will be cheap, and of easy formation.

Power is reserved to the committee to deviate from the proposed line in the vicinity of Manchester, should superior arrangements render it expedient.

Applications for shares, in the subjoined form, and for maps and prospectuses, to be made to the solicitors, and to the following shareholders:—Messrs. Shewell and Son, 25, Tokenhouse-yard; Messrs. Preece and Evans, 8, Cornhill; and Messrs. Taunton and Bush, 25, Austin Friars, London; Messrs. Houghland and Lecce, Mr. Cooke, Messrs. A. Birchall and Co. Thomas Leeds and Son, Henry Benton, J. B. Lock, and Samuel Slater, Manchester; Messrs. Neilson, Messrs. Healey, Mr. Crisp, and Mr. Morris Reynolds, Liverpool; Messrs. T. N. Bardwell and Sons, Shewell; Messrs. Wellbeloved and Oastler, Chester; Mr. E. A. Armitage, Wakefield; Messrs. Grayton and Earle, York; Mr. Thomas Boardman, Blackburn; Mr. W. H. Collis, Birmingham; Mr. Francis Stamp, Hull; Mr. L. Weatherburn, Huddersfield; Mr. William Cronheim, Halifax; Mr. Charles Spencer, Nottingham; Mr. Samuel Eyre, Derby; Mr. James Stokes, Cheltenham; Mr. Joseph Clark, jun., Southampton; Mr. John Thomas Holland, Coventry; Mr. Wm. Mason, Bradford; Yorkshire; Messrs. Payne and Freer, Leicester; Mr. Wm. Tomkinson, Newcastle-under-Lyne; Mr. Richard E. Hine, Macclesfield; Mr. Lea, Cheltenham; Messrs. Tate and Nash, Bristol; Mr. Wm. Miles, Worcester; Messrs. Reed and Nicholson, Edinburgh; Messrs. Ross, Perth, N.B.; and Messrs. H. and W. A. Tassie, Glasgow.

Applications for shares must be accompanied by a reference to the solicitors of the company, the shareholders, or some other responsible person.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Chester and Manchester Direct Railway,

Gentlemen—I request you to allot me shares of £2 2s. in the above railway, and I undertake to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company, and to sign the necessary deeds, and to pay, when required, the deposit thereon of £2 2s. per share.

Dated this day of , 1845.

Name and residence in full

Profession and professional residence in full

KOLLMAN'S RAILWAY LOCOMOTIVE & CARRIAGE

IMPROVEMENT COMPANY.

Increased capital £50,000, in shares of £10 each.—Deposit £2 10s. per share.

DIRECTOR.

The Very Rev. the Dean of HEREFORD, F.R.S., &c., Chairman.
 WILLIAM KUPER, Esq., Deputy-Chairman.
 John Brown, Esq.
 Thomas Davidson, Esq.
 Samuel H. Powell, Esq.
 STANDING COUNSEL.—A. H. Merewether, Esq.
 SOIL, FOR.—George Smith, Esq., 24, Golden square.
 BANKERS.—Messrs. Cocks, Biddulph, and Co., Charing-cross.
 SECRETARY.—A. W. Barnes, Esq. F.S.S.

OFFICES—ALBION CHAMBERS, ADAM-STREET, ADEPHI. The capability of Kolmann's system of railway and its manifold superiority over those in present operation has been fully demonstrated by working models, which are exhibiting at the Adelaide Gallery, but the directors have now resolved, at the recommendation of several eminent engineers, to construct a full-sized locomotive engine and carriage, and lay down at near the metropolis, as convenient a short but sufficiently extensive line of railway, with such curves and gradients as have hitherto been deemed insurmountable, that the practical superiority of the system might be fully developed. With this view the directors have obtained the consent of the shareholders to augment the capital of the company by £50,000, in 5000 shares of £10 each, in order to enable them completely to carry out the objects for which the company was formed.

The superior advantages of the system may be thus briefly enumerated:—Com- plete security from overturning or running off the rails, facility of traversing curves at any practicable speed, power of ascending gradients hitherto deemed impracticable, diminution of dead weight and friction, and very considerable saving of expense in the construction, and in the wear and tear. In addition to these advantages, the directors have secured patents for a most important application of the system to canals, enabling these, under certain conditions, to compete with rail-ways for the conveyance of passengers and goods, and promising most beneficial results. It will be at once perceived that while the capital required to carry out the company's plans is of small amount, the source of profit is almost unlimited.

Applications for shares, accompanied by a respectable reference, to be made at the company's office, Albion-chambers, Adam street, Adelphi, London, addressed to the secretary, where the terms for granting licenses and every other informa- tion can be obtained.

AGENTS.

Plymouth—Messrs. Hopwood and Palmer.
 Leeds—Messrs. Hirst and Brooke, Albion street.
 Manchester—Messrs. Myers and Co., Police-street.
 Edinburgh—A. Moffat, Esq., George-street.

FORM OF APPLICATION FOR SHARES.

To the Directors of Kolmann's Railway Locomotive and Carriage Improvement Company.

Gentlemen.—I request you to allot to me shares in the above company, and I undertake to accept the same, or any smaller number that may be allotted to me, to pay the deposit thereon, and execute the Deed of Settlement, and all other necessary documents, when required. Dated this day of 1845.

Name
 House of business (if any) and address
 Profession or trade
 Reference

CANAL OF THE ALPINES COMPANY.

Capital £100,000, in 5000 shares, of £20 (500 francs) each.

Proprietors not liable beyond the amount of their subscriptions.

DIRECTOR.

Theodore Woolman Rathbone, of Allerton Priory, near Liverpool, Esq. Chairman. Joseph Christopher Ewart, of New Brighton, near Liverpool, Esq. Dep-Chairman. Richard Hall, of London, Esq. Acting Director in England. Edward Good, of Paris, Esq. Acting Director in France.

BANKERS.

Messrs. Glyn, Halifax, Mills, and Company, London.
 Messrs. Charles Lafitte, Blount, and Company, Paris.

ENGINEER.—Joseph Locke, Esq.

With a resident engineer, acting as gerant, appointed by Mr. Locke, and approved by the Directors.

SOLICITORS.

Messrs. Rixon and Son, Jewry-street, London.

The Canal des Alpines is situated in the Department des Bouches du Rhone, in France, where the soil is burnt up and unproductive, unless irrigated with water; and its object is to supply water for irrigating the adjoining lands through which it passes. It is held in perpetuity by grant from the French Government, at about £40 per annum ground rent, and may be considered free from all chance of competition, or fluctuation of income.

It consists of the following divisions and lengths:—

Finished for twenty miles.

1. From the Bridge Donneau, near the River Durance, through Orgon to St. Remy, twenty-one miles. To be executed, under contract, at a cost of £16,000.

2. From St. Remy, through Eyragues, to the River Durance, near Chateau Renard, nine miles. To be executed, under contract, at a cost of £38,000.

3. From St. Remy, through St. Gabriel to the River Rhone, twelve miles.

4. From the Durance at Rognonas, to the Rhone at Tarascon, with two branches called the Barbantanne and Boulbon Branches, about eighteen miles.

The revenue of the canal is derived from a water-tax, payable by the lands receiving irrigation from the canal. This tax is fixed by a grant from the French Government, at a corn rent of one litre forty-nine centilitres per French hectare of land; and, being commuted into money, upon the average price of corn for the preceding ten years, amounts to about thirty-six francs per annum per French hectare (nearly two and a half English acres).

The divisions Nos. 1 and 2 of the canal are expected to be completed and in operation by the summer of next year, and they will then be capable of irrigating upwards of 3500 hectares of land, and of producing an income, at 35 francs per hectare, of at least £12,200 per annum. The other divisions, Nos. 3 and 4, to be completed by the summer of the following year (1847), will be capable of producing from the water tax on the lands they irrigate a further income, considerably exceeding the above. The expenses of maintenance and administration, when the canal is finished, are estimated to be fully covered by a charge of not more than £5000 per annum; and there are other sources of income, in addition to the water-tax, arising from letting the water to drive mills, and from the produce of the mulberry trees on the banks, which are expected to yield the above amount annually, and leave the water-tax a clear net income. The contractor has supplied, and is bound under his contract to provide and plant along the banks, these mulberry trees; and he has also offered to enter into a contract to maintain the canal for a term of years at a lower rate than is assumed in the above estimate.

The canal is acquired by the company for a capital represented by 5000 first class shares of £20 each, on which 6 per cent. interest is payable as a first charge, and secured by the entire revenues of the canal, and also by other properties, so long as required to insure its uniform payment; and the company are to issue, when the income reaches £12,000 per annum, a first series of 500 second class bonus shares of £20 each; when £18,000, a second series of 5000 second class bonus shares of £20 each; when £24,000, a third series of 5000 second class bonus shares of £20 each; when £30,000, a fourth series of 5000 second class bonus shares of £20 each. All these second class shares will carry 6 per cent. interest per annum, until the income exceeds £30,000 per annum, and then they will take amongst them rateably the whole remaining income, after paying 6 per cent. per annum on the first class shares. The first class shares are Capital Shares, for which the sum of £20 per share will have to be paid; but the second class shares are Bonus Shares, on which no payment has to be made.

The proceeds of 2000 of the first class shares (representing £40,000 of capital), and the under-mentioned prospective advantages are to be the property of the original proprietors and projectors; for which they make cession to the company of the grant in perpetuity from the French Government of the entire Canal des Alpines, twenty miles of which are finished, and commencing irrigating operations, and which completed portion a sum exceeding £100,000 has been actually expended—this being by far the heaviest portion of the works. The proceeds of the remaining 3000 first class shares (£60,000) are to be applied to finish the canal. The contract to finish the whole of the remaining works for £54,000, has been entered into by a responsible contractor and landowner on the line of the canal; and the balance of £6000 of capital remaining beyond the £54,000 will, therefore, be applicable to payment of preliminary and contingent expenses.

The original proprietors of the canal and the proprietors of first class shares will have the bonus shares divided amongst them, as set forth in the deed of settlement of the company, upon the following terms:—Of the first issue of 5000 second class shares, 2500 will be appropriated to the former, and 2500 to the latter (the proprietors and holders of the first class shares), in the proportion of one second class share to every holder of two first class shares. Of the second issue of 5000 second class shares, 2500 will be appropriated to the former party (the original proprietors of the canal), and 2500 to the holders of the first issue or series of second class shares, in the proportion of one second class share of such second series or issue, to each holder of two shares of such first issue. Of the third issue of 5000 second class shares, 2500 are to be appropriated to the original proprietors of the canal, and 2500 to all holders of second class shares, whether of the first or second series, in the proportion of one second class share of such third series to every holder of four shares of such first or second series. And of the fourth issue of 5000 second class shares, one half (2500) will be appropriated to the original proprietors of the canal, and 2500 to all the holders of second class shares, whether of the first, second, or third issue, in the proportion of one second class share of such fourth issue to every holder of six shares of such first, second, or third issue. As best explaining the nature of the investment in the stock of this company, and the benefits derivable from the bonus or second class shares, to a party who may have subscribed for, say twenty-five first class shares, and who will have to pay for the same £500, it may be stated that the revenues of the canal are charged in priority with 6 per cent. per annum on this sum in perpetuity, while his proportion of the four series of second class shares above-mentioned, when issued, will amount to a bonus exceeding £600, also carrying an interest of not less than 6 per cent. per annum. Thus the amount of a proprietor's investment would be more than doubled on the acquisition of all the bonuses, and the whole of this doubled investment would be carrying 6 per cent. interest at least. The surplus income, after paying 6 per cent. interest on the first class and bonus shares (viz., the amounts between £6000 and £12,000, and £12,000 and £18,000, and £18,000 and £24,000, and £24,000 and £30,000), is the fund appropriated by the deed of settlement to the Fondateurs. When the income shall exceed £30,000 per annum, the Fondateurs' fund will cease, and the whole revenue is divisible rateably amongst all the second class shares, after paying 6 per cent. interest on the first class shares.

There are £32,000 of debentures now chargeable on the canal, and payable at different periods up to 1863, which the original proprietors agree to discharge out of their proportion of second class shares. The discharge of these debentures is also to be secured by other property of adequate value.

The canal company will be formed by deed of settlement in the nature of a Societe Commandite, whereby each shareholder has the same protection against liability as is given by an act of incorporation in England. The affairs of the company, until the canal has been completed and the second class shares issued, must, according to the law of France, be managed by a gerant in France, under the superintendence of a committee of directors, and when the whole of these shares have been issued,

the company can become a "Societe Anonyme." Under the deed of settlement, £100 per annum is appropriated to the committee of management, which is to consist, in the first instance, of the above-named directors, who go out of office in rotation, in the usual way, after the completion of the remainder of the works.

A deposit of £2 per share will be payable on allotment, and further calls will be made by the directors as they require the same; but no call will exceed £2 10s. per share, and there will be an interval of two months, at least, between each call.

Applications for shares may be addressed to the solicitors of the company, or to the directors, at the company's office, No. 29, Throgmorton-street; but no application will be attended to, unless accompanied by a reference which may, on inquiry, prove completely satisfactory to the directors.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Canal des Alpines Company.
 Gentlemen.—I request you to allot to me shares of £20 each in the above undertaking, and I agree to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company, and to sign the necessary deeds, and to pay, when required, the deposit thereon of £2 per share.

Dated this day of 1845.

Name in full
 Profession and professional residence in full
 Residence in full

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTER-SHIRE JUNCTION RAILWAY.—(Provisionally Registered.)

Capital £600,000, in 12,000 shares of £50 each.—Deposit £2 10s. per share.

The line of railway proposed between Uttoxeter and Dudley has been undertaken at the suggestion of several industrial parties, as combining—without being a competing line with any railway at present made—all the advantages of several projected lines, with additions of no ordinary value. The town of Uttoxeter in the Dove Valley is itself the centre of a rich agricultural district, supplying already the markets of Dudley, Tipton, Walsall, Bilton, and Wednesbury, with cheese, cattle, and agricultural produce, but by a very expensive and dilatory mode of transit. All the proposed lines communicating with Manchester, London, and the Potteries, must necessarily pass to or near Uttoxeter. Already the Churnet Valley, Derby and Stafford, Derby and Crewe, Tean and Dove Valley, North Staffordshire, Manchester Direct Independent, Leicester and Ashby lines of railway, project a station at Uttoxeter. Assuming either of these former, or some equivalent, to pass, this will be the best route from Manchester, Macclesfield, the Potteries, Hull, Sheffield, and the north, to the mineral districts of South Staffordshire, and to Kidderminster, Worcester and South Wales. By the Leicester and Ashby line, which will communicate by its branch to Uttoxeter, traffic of great part of the east of England will be available for Staffordshire and the west.

Commencing at Uttoxeter, the line will be carried over favourable ground to Abbot's Bromley, thence down the Blythe Valley to Hamstall Ridware, where it will cross the proposed Leicester, Burton, and Ashby line, thence to Lichfield; through that portion of the Trent Valley Railway, it will pass close to Lichfield, through that portion of Cannock Chase, where the Epping Canal passes the Brown Hills, thence by Walsall to Beeston bridge on the Walsall station of the Grand Junction Railway. From this point it will pass through Wednesbury and the mineral districts of South Staffordshire to Dudley; there it will join all those railways that will connect the Staffordshire coal-field with Worcester, Ludlow, and Porthcawl in the south-west, Abergavenny, Merthyr Tydfil, Swansea, Hereford, on the west and south. In fact, it will unite the nearest route the east and west of England.

The population on the line exceeds 300,000, and the ordinary traffic arising from internal sources alone is sufficient to maintain the railway, and afford more than ample remuneration to the shareholders.

As a junction line—with the present immensely increasing public favour to railway travelling—it is scarcely possible to compute the amount of passenger traffic, but it must necessarily be very great.

Should it be deemed advisable to extend the line to Ashbourne, the lead, iron, stone, and coal of Derbyshire, the products of the paint manufacturers and barter works at Ashbourne, Cromford, &c., would find a ready transit to Walsall and Birmingham. The increase of passengers attracted by ready means of conveyance to the romantic country of Dovedale and the High Peak, would be, necessarily, very great. By the Uttoxeter Canal would be brought the copper ore, lime, and coal, abounding in the Caldon and the Ribble Mines, and be transmitted by this line to the manufacturing districts of Staffordshire, Warwickshire, and Wales, down to Swansea. A most influential provisional committee, composed with the line, will be published in a few days.

Applications for shares and every information to be made to William Arnold, Esq., Uttoxeter, and John Owens, Esq., 54, Moorgate-street, London.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Derbyshire, Staffordshire, and Worcestershire Junction Railway.

Gentlemen.—I request you to allot to me shares of £50 each in the above railway, and I undertake to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company; and to sign the necessary deeds, and to pay, when required, the deposit thereon of £2 10s. per share.

Dated this day of 1845.

Name in full

Profession and professional residence in full

Residence in full

Reference

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTER-SHIRE JUNCTION RAILWAY.—The supporters of this intended railway congratulate the very numerous supporters of the line upon the decision of the House of Lords in favour of the Broad Gauge being carried to Dudley, the terminus of this line; and to inform them that arrangements are nearly settled with other companies for completing the line of railway from South and Central Wales and the West of England to the clothing districts of Yorkshire, which will make this intended railway a section of one of the first trunk lines in the kingdom.

The publication of the names of the provisional committee has been necessarily delayed in cons. quence of these negotiations.

JOHN OWENS, Esq., Joint Solicitors.

WM. ARNOLD, Esq., Joint Solicitors.

Committee Room, Moorgate-street, July 26, 1845.

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTER-SHIRE JUNCTION RAILWAY.—IN CONSEQUENCE OF THE ALTERATION OF THE STANDING ORDERS OF THE HOUSE OF LORDS, IT HAS BEEN NECESSARY TO INCREASE THE AMOUNT OF THE DEPOSIT IN THIS RAILWAY TO 10 PER CENT.

JOHN OWENS, Esq., Joint Solicitors.

WM. ARNOLD, Esq., Joint Solicitors.

Company's Offices, 25, Moorgate-street, London, August 14, 1845.

FREWASH VALLEY RAILWAY.—NOTICE TO SCRIPHOLDERS.

The Royal Assent, all holders of the company's SCRIP are requested to transmit them to the secretary, Queen-street, Derby, on or before Saturday, the 23d day of August inst., with their names, professions, and residences, written distinctly and at length, in order that they may be correctly REGISTERED. None but registered shareholders can vote at any meeting of the company. The secretary will give an acknowledgement for the scrip, and on the completion of the registry will exchange them for sealed certificates.

SAMUEL WHITAKER, Esq.

Queen-street, Derby, August 6, 1845.

From actual experiments I have made, I find that when low pressure steam, say $\frac{1}{2}$ lb. to the square inch, is permitted to flow in at the upper end of a tall upright vessel, having an opening below, the included column of air is depressed and forced out with the utmost ease and rapidity, while, at the same time, there is no appreciable mixture between the steam and air, the two preserving the most remarkable distinctness of separation. This, in fact, forms the grand principle on which I act—namely, the vertical displacement of the column of air by low-pressure steam. At all times it will be most convenient to employ the time between the running of the trains, to prepare the magazine of vacuum all ready for instant action at any moment's notice; in this way a comparatively small boiler will answer. I may mention, that one grand advantage of having a ready-made store of vacuum at hand is, that the closing of the long valve is performed effectually the instant the communication is formed between the vacuum chambers and the atmospheric pipe, this will obviate much source of loss from leakage, which continues so long when the vacuum is produced by the comparatively gradual process of pumping out the air by the ordinary system. I trust the time is not now far distant, when a full-sized, and, therefore, true, experiment, will be made, to test, by actual practice, the comparative merits of my direct system, with that of the steam-engine and air-pump system, by erecting a set of my vacuum chambers alongside of one of the engines about to be employed on some of the atmospheric railways, obtaining the required steam for my system from the identical boiler, and working the two systems month about, and taking exact account of the coal consumed by each; I should stand or fall by such a true experiment as this, which is beyond all abstract investigations in getting at the real truth.

The rich agricultural and mineral districts of Devon and Cornwall will have similar advantages, and London will be connected with the city of Exeter, and the ports of Plymouth, Falmouth (the packet station of the empire), and Penzance, by the shortest and most direct course. The proposed line will also unite the western districts of the kingdom with Wales and the north and north-eastern counties, and be to the Great Western Railway that which the Trent Valley is to the London and Birmingham and Grand Junction Railways.

The wide gauge, the natural one of the western counties and of Wales, will be adopted, and such portions of the Great Western line as unite Newbury with the metropolis, and Taunton with Tiverton and Exeter, will be connected by junctions with the proposed line.

A distance exceeding thirty miles will be saved by the contemplated line between London and Exeter.

The prospectus, with the list of the provisional committee of directors, will be issued shortly; in the interim, communications are to be addressed to Messrs. Bell, Brodrick, and Bell, solicitors, Bow Church-yard.

CHESTER AND MANCHESTER RAILWAY.—The object of the promoters of this line is to form a direct route from Manchester, as the nucleus of the manufacturing districts, and, consequently, all the great towns of the north as

were professionally interested in supporting the scheme they advocated. They doubtless spoke as to Mr. REMINGTON's line what they believed, but they were in error. The paragraph you have published from the *Railway Express*, and of which I complain, is as follows:—"Here we would gladly pause, after having thus glanced at what are the most striking features of this railway, but a sense of justice compels us to notice what cannot be considered other than 'sharp practice' on the part of Mr. ASHURST, the promoter of a competing line. In 1836 Mr. GEORGE REMINGTON planned the Direct London and Manchester Railway which bears his name. In 1840 I have carefully surveyed the greater part of the country through which it will pass. Long after this Mr. ASHURST announced his competing scheme, the avowed intention of which was to connect existing and projected lines between London and Manchester. He found that REMINGTON's line was the favourite, as it deserved to be; and he does not hesitate to 'appropriate' not the leading features of that line, but the *actual line itself*. This is stealing the besom ready-made. It is pretty clear that this manner of doing business will not answer. We believe that public feeling is against the *rule*. But the very fact that the promoter of a competing line *threw his own plan overboard*, and coolly appropriates the rival one, is the very best, because the most unsuspicious and involuntary compliment which could possibly be paid to REMINGTON's London and Manchester Direct Railway."

The facts, as to me, are these:—In 1840, an advertisement appeared announcing a company for the formation of a railway from Manchester to London. After some time, the movers, who were unknown to the Manchester trade, found it necessary to apply to some of the gentlemen connected with that trade in London to support them. They were referred to me by some of the leading houses in the trade here, and I was requested to report my opinion, not of any line, but of the propriety of their uniting with the applicants. Before I was able to report upon the prudence of men with capital and influence, uniting with men not known to possess either, I was sent for to a meeting of "the board" in Cornhill, and was told that the landlord was urgent for his rent; and I was asked to pay that rent and take the solicitorship of the company. I declined the office, but made the advance, that I might have time to report. The result was, that a union was not thought desirable, and the matter died; Mr. REMINGTON's name was used on that occasion. About this time, in the last year, 1844, Mr. MULOCK advertised that he had taken up Mr. REMINGTON, and intended to form a company. Mr. MULOCK also found it necessary to obtain the support of the trade: he sought it, and was referred to me. He came to me, accompanied by Mr. WEDLAKE, of the firm of CLOWES, ORME, and WEDLAKE, the well-known and respectable solicitors, in London.

In consequence of this, I again had interviews with the principal houses in the trade in London; and they gave me introductions to many of the leading firms in Manchester, whom I saw on the subject. On my return, I made my report to those who deputed me; and they resolved that it was not desirable then to form a company. Mr. MULOCK and Mr. REMINGTON thought differently, and they advertised a company, with the names of gentlemen as a provisional committee, who afterwards resolved that the company should not proceed. During all this time the only question was the propriety of forming a company, not the merits of Mr. REMINGTON's choice of a line. The gentlemen who instructed me knew, without the aid of either of us, that a straight line is the shortest, and that the straightest practicable, would be the best, and this of itself fixed the route. The document which was then prepared by me, and signed by many of the leading houses in the trade, and is in my possession, simply stated—"That a more rapid communication between London and Manchester by railway is of the highest necessity. That it is of paramount importance to the trade and manufactures of the kingdom that such communication between the metropolis and the northern parts of the country should not be dependent upon one line of railway only." These statements the subscribers understood and could make. It would have been absurd and bootless to have asked mercantile men to express an opinion upon the engineering merits of a line of railway not in being. Mr. REMINGTON informed me that he had *not surveyed* the line he suggested, but said that he had gone over the country so as to enable him to say with confidence, that his line was the only line that could be formed, and I believed it. He was naturally anxious to obtain the appointment of engineer; but he was unknown to the parties by whom I was requested to act, and they were desirous, if the matter proceeded, to have the line to be chosen approved by an engineer more generally known. He was unwilling to have this reference made except to one gentleman, and the matter ended. It is fortunate for me now that the absurd imputation is made against me of "filching" his line, that I have found the map of the line which he issued in 1840, and on comparing it with the map he now issues, I find that the two are essentially different.

In 1840, his line ran to Leicester, taking the Midland Counties Railway the whole distance from Leicester to Derby; resuming at Derby it proceeded to Leek and Macclesfield, neither touching Cheadle or Uttoxeter. His present line does not touch the midland counties, and does not go to Derby, and whoever knows anything of the country, or has Mr. REMINGTON's present map, can see the important and extensive change which this necessarily makes between the two. He has, then, so far as making red lines on a map gives title, entitled himself by a cheap and easy process to two lines, and his friends accuse me of filching one, but do not condescend to say which. They at the same time proceed to show a motiveless plunder for a valueless abstraction, by accusing me in a second count of not publishing any line. As to his first line, Mr. REMINGTON said it was impossible to make a better, and I have his printed plan before me, asking in 1840, 4,000,000/ to make it. To make his second line so essentially different, I have his plan and prospectus before me, asking for 3,000,000/ to make it. I have also before me another of his prospectuses, asking for a capital of 5,000,000/ to make it. If, as he says, he has carefully gone over these various and differing lines, his judgment must be sadly at fault. Had the trade determined to avail themselves of his services, it would have been necessary to have drawn his attention to these serious variances, but that necessity did not arise.

Mr. REMINGTON's friends have, in their speeches, confounded the formation of a company with the drawing of a line on a map, and have assumed the childish absurdity that to rule a line on a map, gives a title to the line of road and to the office of engineer. So far from taking either of Mr. REMINGTON's abstractions, I have not even been guilty of the sin of originating "the Direct London and Manchester Railway Company," which is really the offending point. In this year, Messrs. SUDLOW, SONS, and TORG, as they assure me, without knowing anything of Mr. REMINGTON, or ever having heard of his lines, registered and advertised, without my knowledge or privity, a direct line from London to Manchester. They also applied to some of the principal houses in the trade, and were referred to me; and then, and not till then, did I hear of it. I might, then, as Mr. REMINGTON did, have registered another company by adding another word to vary the title, but I was not guilty of the folly of endeavouring to establish two companies for one purpose, and of wasting the funds of both; but as the trade here was of opinion that a direct line must, and ought to be formed, with the consent of Messrs. SUDLOW and Co., my name was added to theirs, and I was requested to submit the views of the trade here to their friends in Manchester, which I did; received their authority in writing again, as the houses here thought that signatures given a year before ought not to be used where circumstances had altered, and opinions or interests might have changed. So far from adopting either of Mr. REMINGTON's lines, the managing committee of this company determined to have a line surveyed for themselves, and they gave authority to Mr. EASTRICK to personally survey the country, and give his opinion of the best direct practicable route for a line. If ruling a line on a map between given *termini* constitutes ownership, I admit Mr. REMINGTON's title to as many lines as he rules, and I have not interfered with his efforts to realise them. His friends confound the formation of a company with the making, or rather the marking, of a line, and scold me because the trade have themselves formed a company.

That is the cause of a thing without which it would not be. If Mr. REMINGTON had been appointed engineer to the company they would not have heard of this preposterous claim to exclude the engineering world from an important tract of country. But, because a young man has published a map, with a line ruled upon it, and has asked the public to grant him, first 4,000,000/ then 3,000,000/ and afterwards 5,000,000/ to realise his chrotchet, he argues that the country for railway purposes is *tabooed* to all other engineers. Now, suppose that previously to the formation of our great railways some aspiring tyro had published a map with an impossible or a singularly difficult line, had then contended that the London and Birmingham, and Great Western Companies were bound to take him as engineer, and that the great minds of the engineering world ought to be shut out from the country he had marked upon his map, would the railway world have listened to such insane drivelling? And could those who contended for so wild a theory have hoped to sustain their characters for sanity whilst upholding it? Verily, those who advance such twaddle in the Town Hall of Manchester, sink in intellect below Johanna Southcott, for she addressed herself to the ignorant, but they go to the Athens and the aresopagite of railway science to publish their sanity.

Mr. REMINGTON cannot be ignorant that in 1840 many objections were mooted against his line, and that amongst other serious objections it was stated that it required at one place an embankment eighty-one feet high, and three miles long, and would have taken eighteen years to form it. Being accused of stealing his brains, I am bound to repel the accusation, but I confine myself to the widely different sums required upon the face of his own advertisements to show that their product was not worth stealing, and that those for whom I acted having capital and character to lose, it was my interest to avoid committing them to a gentleman whose reputation as an engineer has yet to be won, and to steer clear of a line presented by his parent in so uniformed a state, that he did not know, when he offered it for 2,000,000/ that it would require 5,000,000/ to mature it. Mr. REMINGTON, or the friend who wrote the article in the *Railway Express*, says I stole the "besom ready made." I assure them I have not stolen the embankment spoken of. I do not affect engineering knowledge, but, irrespective of the embankment alluded to, a very moderate quantity of caution would induce any one to pause, ere he advised a company to adopt a plan for which sum so wide as those Mr. REMINGTON has named had been asked by its parent. I have not, until thus assailed, said a word depreciatory of this gentleman's plans, for railroads are not made by verbal squabbles; but I am sure you will feel that, being accused of "sharp practice,"

"filching," and "stealing," if I had left the imputations unnoticed, I might, and should, probably, have been taken to have admitted, because I had not denied, charges made in language so gross and injurious. W. H. ASHURST.

P.S.—Since writing the above, I have had put into my hands the *Morning Herald* of the 23d of May last only, and I there find that Mr. REMINGTON advertised his line, and asks for 2,000,000/ only, in 40,000 shares of 50/ each; and I have also had brought to me a prospectus, issued by him in 1844, for a Direct London, Manchester, and York Railway; for this he asks 7,000,000/ Have the York Company stolen their line from him? By asking severally 2,000,000/ 3,000,000/ 4,000,000/ and 5,000,000/ for his proposed excursion to Manchester, he proves that, apart from the morality of the thing, it would be egregiously foolish to steal any line from so variable a genius.

X PROGRESS OF RAILWAYS IN FRANCE.

[FROM OUR PARIS CORRESPONDENT.]

It appears that a fusion has been effected between three companies, heretofore considered the most important, that had formed themselves to bid for the concession of the Northern Railway—the company of Laffitte and Blount, the company of Rosamel, and the company of Pepin-Lehalleur; and the united company has placed itself under the wing of Rothschild's and another great banking house. I do not know what the very numerous shareholders in England, of Laffitte's, and Rosamel's, and Pepin-Lehalleur's companies, may say to this union; but I happen to know, that the great body of shareholders in this country are bitterly exasperated at it. Of course, the first consequence of the union will be, that the persons who had subscribed for the greatest number of shares in one or other of these concerns, will have to content themselves with a much less number than they had previously calculated upon; and that other persons, perhaps the majority of the subscribers, will get no shares at all. This being interpreted into comprehensible English, means, that the whole body of shareholders will, some partially, some entirely, be tossed overboard, having to content themselves with the return of their respective deposits, *minus* the expenses that have been incurred—expenses that, for advertising alone, cannot but amount to a very considerable sum. It may be said, that the subscribers will lose nothing more than they would if their company had failed to obtain the adjudication. That is undoubtedly true; but still I fancy that if the great body of subscribers had been consulted, they would rather have run the risk of the adjudication, than consent to be sacrificed by a preliminary union between three companies they had hitherto looked upon as rivals. I do not say a word against the persons at the head of either of the three companies of Rosamel, Laffitte, and Pepin-Lehalleur—they are "all, all honourable men;" but certainly they ought, as a matter of delicacy, to have taken the trouble to consult the very numerous body of persons, English and French, who had shown their confidence in them, by subscribing for shares before they had adopted the important step of forming themselves into one great company. As it is their precipitation lays them open to the charge of thinking only of themselves (for, of course, *their* interests are duly provided for, or, assuredly, the coalition would never have taken place), without caring one single straw about their supporters. *Le National*, the republican newspaper, denounces this union of the three companies in the most energetic terms, and even goes the length of declaring, that they have incurred the penalty of imprisonment from one month to a year, and of a fine from 200/ to 400/ declared in article 419 of the Penal Code, against all those persons who shall, by union or coalition, conspire not to sell, or prevent the sale of, at less than a certain price of, among other things, "*des papiers et effets publics*." You will perceive that the *National's* zeal somewhat outruns its discretion, for promises of shares in a railway company, if the company gets the railway, which is all at present that there is in the market, is a species of property which, by no ingenuity of legal argument, or perversity of legal judgment, can be brought within the designation of "*papiers et effets publics*." No, good *National*, Messrs. Rosamel, Pepin-Lehalleur, and Laffitte, have not been such asses as to run their heads against the Penal Code; they have done nothing but what, in a legal view, they are warranted in doing; but, as I have said before, they might and ought to have done it with a little more delicacy towards, and a little more regard for the interests of, the many hundred persons, who had done them the honour to place confidence in them, and even to deposit money in their hands.

What course will the Minister of Public Works pursue in face of this formidable coalition, or, if the word be preferred, union? Will he postpone the adjudication? Will he reduce the time for the concession of the railway law, as to render it impossible for the company to take it? Will he, in other words, take measures to have a *real bonâ fide* concurrence for the concession of the railway, such as the legislature intended; or, will he bow his head before the gigantic concern, in front of which marches his majesty Rothschild, king of finance? I am aware that there are other companies still in the field, which, if they pledged themselves to proceed to the adjudication, may still obtain such a large share of public support, as may enable them to present themselves boldly at the adjudication, on the anxious 9th of September. But, at this moment, the impression is, that Rothschild, and his three companies rolled into one, will carry all before him—it being believed that the Minister of Public Works, opposed as he is in principle to the adjudication system, and anxious, as he must needs be, to see the line in the hands of a responsible company, will not throw any obstacle in the way.

No doubt before this, the union of the three companies will have been announced, with great pomposity, by your daily contemporaries. But your readers, with a moment's reflection, will perceive, that although, strictly speaking, there may have been a breach of faith with them, they really lose nothing at all, except the chance of a profitable investment of their money. That that is a loss serious enough to make them angry I admit, but, after all, with the great competition that would have existed, had this union not taken place, the chance was a very uncertain one; and even supposing that their particular company had been successful, it is by no means improbable, that the competition aforesaid would have so reduced the time of the concession, as to render the railway not one of the most brilliant investments in the world. The union will occasion loss to the holders of promises of shares; but those who subscribed for the sake of investment, and not for speculation, will get off, with the disappointment, and their share of the preliminary expenses, just as they would have done, if their company had actually failed at the adjudication.—The *Journal des Chemins de Fer*, in its last number, complains that the railway journal of Belgium had copied an article from its columns, without acknowledgment, which article had subsequently been translated in the *Mining Journal*, and quoted as from the Belgian paper. Your contemporary does not, of course, complain of the *Mining Journal*, but of the Belgian print.—Paris, Aug. 13.

X NORTH WALES RAILWAY.—The first meeting of the shareholders in this company, since the passing of the Act of Incorporation, was held at the London Tavern, on Thursday last.—Sir W. WYNN was in the chair, who, in his opening remarks, dwelt much on the exceeding good prospects of the undertaking, not only as a source of profit to the proprietors, but as of great benefit to society at large, not only as between England and North Wales, but as forming a new and direct means of communication from Porthdyllynau to Wicklow, and thence with the whole of Ireland.—The report stated that the Royal Assent to their Act had been obtained on the 21st of July last; the district through which the line would traverse was from Bangor to Porthdyllynau, both in the county of Carnarvon, the latter port possessing great advantages, and being a safe and commodious harbour. It set forth that, although some opposition had been offered to them in Parliament, they had amalgamated with an opposition company, and made arrangements with a hostile landowner, which had been quite satisfactory on either side, and they had at last proved completely successful.—From the statement of accounts, it appeared that the total expenses up to the present time had been only 7500/—The report was unanimously received and adopted.—On the proposal of Mr. CHAPMAN, that 1000/ per annum be placed at the disposal of the directors for their services, the CHAIRMAN stated that he had had a conference with his colleagues, and assured the meeting they should feel perfectly satisfied with 700/ It was, however, eventually carried, that 1000/ should be at their service, leaving to them, as circumstances might turn out, either to appropriate the whole or only the minimum sum.—Mr. J. Marriner was then appointed secretary, at a salary of 300/ per annum.—Messrs. Brice and Edginton were chosen auditors, and thanks having been passed to the chairman and directors, the meeting separated.

X HAYLE RAILWAY COMPANY.—A general meeting of the proprietors in this company was held at the offices, on Thursday last, the principal object being to empower the directors to treat with the West Cornwall Railway Company for the purchase by that body of the Hayle Railway.—A. L. GOWER, Esq., was in the chair, and, after reading a short report to the above effect, and a letter from the secretary of the West Cornwall Company to the secretary of the Hayle Company, stating their readiness to negotiate for the purchase of the line, contingent on the consent of Parliament, a resolution was passed, giving the directors the necessary powers, it being understood it was not to be disposed of for a less sum than what it had cost the proprietors.—James Alston, Esq., and L. J. Enthoven, Esq., were re-elected directors; and Mr. Macdonell, the late secretary, having resigned, he was elected a director in the room of Mr. Mowatt, and Mr. S. D. Fleming was appointed secretary.—A sum of 10L. 10s. was then voted to the auditors, in consideration of three years service, and thanks having been voted to the chairman, the meeting broke up.

X DEVON ATMOSPHERIC RAILWAY.—Messrs. Harvey and Co. have nearly executed the order for six fly-wheels for this railway, measuring twenty feet in diameter, and each wheel weighing near fourteen tons. Two of them have been sent to their place of destination, and the other four are in a great state of forwardness.—Letters from Haarlem announce that the Mammoth engine has been put to work, much to the satisfaction of the proprietors and engineers. An order is expected soon for two engines of the same size, and on a similar construction.—*Falmouth Packet*.

X NEW RAILWAY VELOCIPED.—Mr. R. Jones, of the Seoint Iron Foundry, Carnarvon, has recently constructed a new locomotive, combining the principle of the velocipede with that of a carriage, capable of carrying twelve persons. The machine is intended to propel a carriage along the Padarn Railway, but is also adapted for traversing the rails alone. The present is an improvement on the velocipedes previously constructed by Mr. Jones, for the quarrymen on the line—they being worked by the feet only, while the labour is now divided equally between the feet and hands—the motion being induced by handles and pedals, and is so facile in its movement, that a child can impel it rapidly to or fro at will. The machine is wholly composed of iron, and weighs about half a ton.

X DIRECT LONDON AND EXETER RAILWAY.—In a former Number of the *Mining Journal* we adverted to this scheme; and, on perusal of the prospectus since published, we have no reason to withdraw the opinion then expressed in favour of the undertaking. The question is opened fairly and vigorously without fear or pretended concealment of its purpose, whether the existing establishments of the Great and South-Western Companies shall prevent a main trunk from the west of London to Exeter, and thence to the mining districts, and extreme part of England. Bearing in mind, that the extension of the Great Western from Bristol, its avowed object, to Exeter, was an enlargement little expected at the time by those most favourable to that company, and is so far inconsistent by reason of the sinuosity of its course from the metropolis, we can not think the presumed opposition on its part can ultimately affect this project; though, doubtless, obstacles and difficulties will be suggested to it. It is not irrelevant to these observations to refer to a publication put forth at the time when the Great Western Company was at about the same period of existence as the present, emanating from one of its most able and zealous advocates, who, in a comprehensive manner, enters on the whole subject of railway communications. This little work was published in 1834, and is called "*Proceedings of the Great Railway Company and Communications*;" contains many truths and prognostics since singularly realised, and, among other things, states—"That railways will be constructed on all the main thoroughfares of the kingdom there can be little doubt." The course suggested by the Direct London and Exeter Railway, is certainly through a main thoroughfare of the kingdom, and is, moreover, the natural and long-used line of communication; extending, as it does, from its commencement, through the densely populated districts of Brompton, Hounslow, Brentford, and thence leaving gradually the Great Western as it proceeds, traverses a country where no railroad at present exists. The opposition from that company, therefore, offers no sound argument against the measure. There is, however, another opponent not far distant in the South-Western, which has been increased probably from the whispering abroad, as well as the notices from the company whose project we are reviewing, and is hereby engaged in co-operating with others to its attempted exclusion. Why should the project from London to Southampton, undertaken with a view to afford communication to the harbour, and thence facility of transport to other countries, throw out its branches to the west, because a main trunk line was suggested by others? We have abundant proof that public feeling is in favour of direct communications, and no doubt can exist as to their utility. The river intervening from the commencement, between the proposed line and the South-Western, shows that the latter is far from being able to afford accommodation to the inhabitants westward from the metropolis; a natural boundary is thus formed, and there appears to us no reason why the South-Western should successfully oppose any more than the Great Western the progress of this measure. The exigencies of the public require it, and that the course is open is evident by other companies being on foot to some of the places of resort near the metropolis—namely, Hounslow, Egham, Staines, and Windsor. It is quite idle to suppose these could be sanctioned while a trunk and independent line to Exeter is projected, giving the benefits of the shorter lines, as well as a communication to the extremity of the kingdom. Organic lines are those which, least of all, destroy the country, and with the taste which prevails ought, and will be, most popular and pursued by the Legislature. The delays which occur in proceeding through Bristol are subject of great complaint, several hours sometimes intervening during which the traveller is detained on his route. The necessity for another station is, therefore, evident, and it is not our intention to enter into the complaints sometimes made by those who are, or fancy themselves, aggrieved by the Great Western Company's neglect. Considering the extent of its duties, perhaps greater regularity could hardly be expected; but daily experience suggests, as increased communications are daily taking place, it is evident the transit effected by its aid cannot be usefully or safely increased. None is better calculated to stay undue monopoly, and yet not do permanent injury, so well as the Direct London and Exeter. In the spirit of showing the necessity for this, and not for the purpose of cavilling, it is observable that the writer of these observations, came from Southall, on a recent occasion (the 4th instant). The train was due at five minutes past nine; he waited till a quarter past ten at the station, but it had not arrived. At this time the long train from Bristol was due, and shortly afterwards arrived, having attached to it the train due at nine o'clock. They came together, laboured considerably throughout, and arrived, we believe, with great apparent difficulty. He examined the length of the entire train: the engine was at the most extreme part of the station, and the last carriage was at the other end of the platform, extending thus over the whole length of the covered building. If these things are allowed, is it not rather a matter of surprise that the trains arrived in safety at all, than that accidents occur? We think public feeling will go with us in these observations, and require that stations and companies be formed with arterial communications, so as to disperse the traffic from its tendency to increase to a dangerous extent from any one. For the reasons stated, we think the company will succeed in general estimation, and that its promoters are entitled to the thanks of the public for the bold and candid manner in which it is brought out, and that it is not too much to expect it will prosper, supported as it is by the respectable names attached to it.

X ALPINE COMPANY'S CANAL.—At a time when railways alone in every part of Europe appear to form the only source for speculation or investment in new joint-stock companies—when mining, once such a chosen field, appears to be deserted by European capitalists—and even the shares of well-paying banks, insurance companies, &c., are almost a dead letter in the market, it is pleasing to have some new subject to which we can direct our thoughts and investigation; and it is with the more satisfaction that we are led to a review of the "Canal of the Alpines Company," inasmuch as it is not a canal for traffic, and one likely to attempt competition with railways, which would be sure to prove abortive, but purely for agricultural purposes. The canal is situated in the Department des Bouches du Rhône, France, a good soil, but where water is so scarce that, unless artificially irrigated, it becomes quite burnt up and unproductive. The object of this company is to irrigate in the most complete manner the lands through which it passes, and thus, under the same general climate as other lands more fortunately situated with regard to the liquid element by a judicious and well-regulated supply, render them equally or more productive. It is held by grant from the French Government at 40L. per annum ground rent, and we understand is free from the chance of competition or fluctuation of income. Twenty miles of this canal is already completed to St. Rémy; nine miles is under contract for 16,000L. to the river Durance, near Chateau Renard; and two branches are also under contract jointly for 38,000L.—one from St. Rémy to the Rhône, twelve miles; and the other from the Durance to the Rhône at Tarascon, eighteen miles. The tax to be taken for irrigation is fixed by the Government at 36L. per hectare, or 12L. per English acre per annum, and by the summer of 1846 the two first divisions of the canal will be complete, and capable of irrigating upwards of 8500 hectares of land, and thus realising an income of 12,200L. per annum; the remaining parts will be finished in the summer of 1847—in the meantime, all deposits will realise a dividend of 6 per cent. Other sources of income are also attached to this undertaking. The contractors have undertaken to plant mulberry trees all along the banks, which will yield a large income, and further profit will be made by letting water power for turning mills, &c. The capital required is 100,000L., and the scheme appears a fair and legitimate undertaking, and one, though novel, likely to prove highly remunerative.

X LONDON, HOUNSLOW, AND WESTERN RAILWAY.—There is no district in the suburbs of the metropolis which offers such prospects for the well-being of a railway as the western part of London to Brentford, Hounslow, &c., and it is only a